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LECTURES
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LECTURE III.

THE NASAL CAVITY IN THE HORSE, THE OX, THE SHEEP, THE SWINE, AND THE DOG. (*Continued.*)

OF the other bones, Gentlemen, which form the parietes of the nasal cavity, my description will be brief. Few points of practical importance can be connected with them, and I have too much to do in the present course to be delayed by that which does not immediately bear upon the function of parts, or the nature of disease.

The Superior Maxillary.—In the horse this bone forms by far the greater part of the lateral portion of the external parietes of the cavity of the nose, and the central portion of the floor of it; in fact, it constitutes more than three-fourths of the bony wall of the nasal cavity. The superior maxillary will be best described, when we consider the digestive system to which, as containing the teeth—the agents of mastication—it most properly belongs. I will now content myself with pointing out to you on its internal surface, the attachment of the inferior portion of the superior turbinated bone, along the suture connecting the superior maxillary with the nasal;—the curious depression, or gutter, hollowed out in it for the middle meatus of the nose, or the channel through which the secretions, natural or morbid, from the nasal cavity, and the maxillary sinuses, are discharged;—the prominent, but irregularly-formed ridge for the attachment of the inferior turbinated bone;—the more spacious hollow beneath, constituting the inferior meatus, or the principal or only air-passage;—the inferior portion of the bony canal which contains the anterior maxillary nerves, and also the inferior division of the bony portion of the lachrymal duct. You will likewise observe, that the palatine processes of this bone form the central and greater part of the floor of the nasal cavity and the roof of the palate; and that, denticulated with the suture that unites them, is the vomer, running along the whole of the floor, and supporting the cartilaginous septum by which the cavity is divided.

In Cattle the superior maxillary bones will be found like the nasals, and for the same reason, considerably smaller; but in addition to this, other bones encroach upon them, and particularly the palatine bone at the floor of the cavity. The other points of difference are, so far as the nasal cavity is concerned, the greater length and size of the canalis infra-orbitarius, and the thickness of the floor; not consisting of a single plate of bone, or with a very slight diploe, but hollowed out into numerous and deep cells, and being a continuation of the maxillary sinuses. In addition to this, we may remark the shortness of the nasal cavity compared with that of the horse resulting from the shortness of the superior maxillary bone.

In the Sheep, the superior maxillary is shortened almost as much as in the ox.

In the Swine it is diminished, by the intrusion of the anterior maxillary for the purpose of strength; and *in the dog*, while the bone is enlarged for the more extended and powerful insertion of the muscles of mastication, even so as to push the lachrymal bone from its place, the nasal surface is increased by the depth and projection of the bone, rather than by its length; while it is curtailed below, even more than in the ox and sheep, by the circular expansion of the palatine bones. The shortness of the bony canal of the anterior maxillary nerve, is very remarkable; the bulk and strength of the masseter muscle seeming to require this earlier appearance and distribution and communication with the motor branches of the portio dura of the seventh pair.

The Anterior Maxillary Bones.—These are the *inter-maxillaries* of the comparative anatomist, locked between the superior

maxillary bones, and also belonging to the digestive system.

In the horse, their posterior borders run along the anterior and upper edge of the superior maxillary, between which and the nasal bone, the extremities of it are inserted. They thus leave a large angular space, which is occupied by the soft parts that constitute the nostrils, and that are moveable, and can expand or dilate as the respiration or breathing of the animal may require. These borders, narrow, rounded, and polished, afford attachment to important muscles presently to be described. The inner surface of these processes forms an attachment for, and supports the lining membrane of, the nasal cavity anteriorly.

These bones, of which there is one on each side, uniting, form the rounded extremity of the upper jaw, in which the incisor teeth are inserted, and from the under and palatine surface of which there proceed two long thin projections of bone, forming the anterior portion of the roof of the palate, and the floor of the nasal cavity.

In the Ox.—The anterior maxillaries of the ox, containing no incisor teeth, are small compared with those of the horse, and barely reach to the nasal bones. There is generally a small portion of cartilage interposed between the extremity of the anterior borders of these bones, so that they seem to diverge from each other, forming a broad termination for the elastic pad or cushion which is the substitute for teeth here; and the palatine processes are longer and narrower, and leave a considerable space unoccupied, except by soft substance, in the roof of the palate and the floor of the nose.

In the Sheep.—These bones are similarly constructed as in the ox, except that the anterior extremities, constituting the base of the muzzle, are not comparatively so broad.

In the Swine, for the purposes of strength and digging to which I have alluded, the anterior border is somewhat sharpened, leaving but a small space for the nostril, and he wants not a more extensive one, for he is not an animal possessed of remarkable speed. The process of the anterior maxillary, received between the superior one and the nasal bones, is very much longer. In the horse it is not one-tenth part of the length of the nasal bone. In the hog it reaches two-thirds of the way up that bone. The attachment between these bones is likewise a complicated one, and all this to give strength to the part. The palatine processes here are more bony laminæ.

In the Dog, a beast of prey, strength is required in the anterior maxillaries; therefore the border is short, thick, and rounded; the opening of the nose is small, but round, instead of angular; the process between the superior maxillary and the nasal is long, but not so wide as in the hog, and the connexion between the bones is a denticulated and mortised one, and soon becomes obliterated. The palatine processes are wider than in the swine, but not so wide as in the sheep or the ox.

The Palatine Bones.—Constituting the crescentic and posterior border of the palate and the nasal cavity, we find these bones. They are irregularly formed, and a perfect description of them would detain us for a length of time that we can ill spare. We first observe them at the termination of the palatine processes of the superior maxillary bones, as it were surrounding, but, in fact, locked in and supported by, these bones. They form, in all our domesticated animals, a smooth round polished border at the point where the cavities of the mouth and the nose would terminate in one common passage leading on to the pharynx, and which border gives attachment to the velum palati, or soft palate, presently to be described, that partially or completely separates those cavities. If we trace this bone posteriorly in the *horse*, we find that it forms, on either side, the wall of the continuation of the nasal cavity from both nostrils, and which, now undivided, is called the ductus communis narium. It is separated from the mouth by the velum palati, and leads on towards the larynx. We here observe two processes on either side of this canal, one behind the last molar, and being the pterigoid process of the sphenoid bone, the other further back, and being a styloid, or sharpened process of the palatine bone, and having, in the recent subject, a beautiful cartilaginous hook or pulley, round which plays the tendon of the stylo-palatine muscle, or principal tensor muscle of the velum palati. Externally we trace the connexion of this bone with the tuberosity of the superior maxillary; and, lying as it were between these two bones, that singular and important depression or hollow leading to the anterior and posterior palatine foramina, and the infra-orbital canal.

The principal difference in the construction of these bones in our other patients, consists in their relative bulk. In the *ruminant* the palatine bones occupy a far greater portion of the palate and the floor of the nose than they do in the horse. They particularly do so in the *ox*; and the walls of the ductus communis narium are considerably deeper. In the *hog* and the *dog* the palatine bones throw an elliptical portion of no little development down the palate.

The Vomer.—The last bone to be described is the *vomer*. It cannot be said, strictly speaking, to form a part of the floor of the cavity of the nose, but it lies

along the centre of it, denticulated with, and supported by, the suture which unites the palatine processes of the superior maxillary. It is called the vomer, from its resemblance to a ploughshare. It reaches from the palatine processes of the anterior maxillary to the sphenoid bone; and is composed of a groove which embraces and supports the cartilage that divides the nostrils. It continues in contact with the floor of the cavity through its whole extent, and when it arrives at the ductus communis, it pursues its course along the centre of it, unconnected with either of the sides, until it arrives at the æthmoid bone, on the body of which it expands, seemingly embracing it; and two processes like the ears of a cat project still more posteriorly, and terminate on the sphenoid bone. It does not, however, closely adhere to the æthmoid bone, but there is a space between them towards the centre through which nerves and blood-vessels pass to the nostril, and particularly to the cartilaginous septum.

The difference between this bone in the horse and in *cattle*, principally consists in its articulating in the latter with the maxillary bones only, and not with the palatine, so that in them the nasal cavity is not divided through its whole extent, but there is a communication under the vomer, before we arrive at the ductus communis, and this communication is more or less extensive in proportion to the space occupied by the palatine bone in the floor of the cavity. In consequence of the vomer being thus separated from the palatines, and likewise of the depth of the palatine surfaces that line the ductus communis, the vomer seems in cattle and sheep to be deeply buried between them. The groove of the vomer is likewise deeper in cattle than in the horse, for if it denticulates only with a part of the floor, it is necessary that it should more deeply embrace the septum in order to give it sufficient support.

The Septum.—The central wall of division between the cavities of the nose is a cartilaginous, and not a bony one. It is of considerable thickness and strength, embedded in the channel of the vomer below, firmly adhering to the suture of the nasals above, and extending from the points of the nasals anteriorly, to the descending floor of the frontal sinuses, and to the cribriform plate of the æthmoid bone posteriorly. It divides the cavity of the nose into two equal parts, and is placed in the centre for the purpose of strength. I have stated that the nasal bones are liable to injury; they are occasionally fractured, but this firm and elastic cartilage placed under the crown of the arch affords a very considerable support, and a support of a peculiar nature, a gradually yielding resistance, that neutralises almost any force that can be applied.

We shall see, by-and-by, that the membrane lining the nasal cavity is a highly sensitive one, and peculiarly liable to accident and disease. The inflammation excited will rapidly spread, and the whole of the cavity may participate in it; thence would arise pain and swelling, and difficulty, or impossibility, of breathing through a passage previously nearly filled with the apparatus belonging to the sense of smell. There is one species of inflammation insidious and fatal, to which the horse and his varieties are alone exposed—viz. that of glanders. This interposition then of the septum is a wise and benevolent provision to hinder the spread of the mischief, by cutting off all communication with the neighbouring parts; and also to preserve one nostril pervious, when the other is diseased or obstructed. It would appear as if there were design in this—as if that dreadful malady, which our absurd management of this noble quadruped has entailed upon him, had been foreseen, and in some degree provided against. The horse and the ass alone are subject to glanders, and in them alone is the division between the nostrils perfect. From the separation of the vomer from the palate there is a communication between the cavities far below the crescental border in *cattle and sheep*, while in the *hog* the perfect division scarcely extends more than half-way along the nostril. There is a sufficient division to cut off the communication of inflammation or other disease from one nostril to another under ordinary circumstances; and where this best of the equine race is concerned, the division is perfect. Where it is left imperfect by the separation of the vomer from the floor, and the consequent impairment of strength, there is provision made for the security of the part in the broad expanse of the forehead in the ox and the sheep, and on which the blow would be more likely to fall than on the nasals; and in the form and the nature of the connexion of the nasals with the neighbouring bones, and also in the strength of those bones in the hog and the dog.

The Æthmoid Bones.—We arrive at length at the contents of the nasal cavity. Posteriorly and superiorly, on each side, in the common duct, but scarcely reaching into the closed nostril, is the æthmoid bone, or that portion of it which may be termed the *æthmoidal cells*. On the upper and anterior part of the æthmoid bone in the *horse* there is a somewhat-curved projection or eminence, possessing no indistinct resemblance to the forepart of the comb of a cock, and hence called the *crista galli*. It supports the perpendicular plate of the skull before, and the falciform process of the dura mater

behind; on either side of it, and supported by it, are two thin plates of bone pierced with innumerable holes—the *cribriform plates* of the æthmoid bone—and through which pass the pulpy filaments of the olfactory nerve.

From the bony arch which surrounds this plate, arises a pear-shaped collection of thin, porous, bony cells. I feel some difficulty in describing them. Conceive a great number of little hollow pedicles proceeding from, and forming around, the cribriform plate. As they move downward they belly out into distinct vesicles or cavities; smaller and more numerous behind; fewer in number, and larger in front, and each of them, not a simple cavity, but more or less convoluted; while the bony walls of these cells is of gossamer thinness, and porous as any gauze; all of them communicate together, and are lined and externally wrapped together by the same membrane, the whole assuming a pear-like shape, attached by its base or greater extremity, decreasing in size as it proceeds downward; the cells becoming fewer, and terminating at length in one cell, a kind of pedicle or stalk, and which passes under the superior turbinated bone, and communicates with the central meatus, and forms a kind of valve over the opening between the nasal cavity and the maxillary sinuses. Then if you add that the olfactory or first pair of nerves abuts upon these cribriform plates, and passes through their minute openings, and spreads itself over every one of these cells, but thicker and more evident to the eye near the cribriform plate, you have a tolerably correct picture of this portion of the æthmoid bone.

This bone has different degrees of development in different animals, in proportion to their acuteness of smell. The *ox* is not so domesticated an animal as the horse. He has more occasion for acuteness of smell than the horse, and particularly in the early part of the spring, when the plants are young, and have not acquired their peculiar scent, therefore this portion of the æthmoid bone is much larger in him than in the horse. In the *sheep* it is large, and seems to fill the superior portion of the nasal cavity. It is even more developed in the *swine* than in the horse, but in the *dog* it seems to occupy the cavity almost to the exclusion of the turbinated bones. Being nearer to the cribriform plate than they are, it is probably most concerned in the sense of smell, and therefore larger where acuteness of smell is required, and in proportion as it is required. It is much more fragile in the dog than in the ox, and the plates have a considerably thinner structure. The æthmoid bone of the horse or the ox may be removed from its situation with little injury, but that of the dog can scarcely be meddled with without fracture.

The Turbinated Bones.—Below the æthmoid are the two turbinated bones. *The superior turbinated bone* in the *horse* seems to be almost a continuance of the æthmoid. It is oblong and convoluted, and thence its name, turbinated or turban-shaped. The French call these bones *cornets*, from their convolutions. It presents a labyrinth of cavities, divided into cells by curious thin septa, and all of them communicating with each other; and the parietes being thin, porous, elastic, in the living animal, and exceedingly brittle in the dead one.

It is so placed as to form a division between the nasal cavity and the maxillary sinuses. It is that which renders them separate cavities, and there is a communication between, as I have stated, under the valve-like structure of the prolongation of the lower cell of the æthmoid bone.

In *Oxen* the superior turbinated bone is small and simple, and is almost destitute of convolutions. It is evidently merely supplementary to the æthmoid, and its function is diminished and rendered unnecessary by the development of that bone. This is more particularly so in the *dog*, where the turbinated bones are reduced to utter insignificance by the bulk of the æthmoid.

The *inferior Turbinated Bone* in the *Horse* is more porous than the superior one; it is also more convoluted, and the convolutions are not a little complicated. The gauze-like structure of this bone is worthy of notice, and also the different manner in which the two cornets are convoluted; the upper portion of the superior bone being most closely attached to the walls of the cavity, and the lower border lying comparatively loose;—the reverse taking place with the lower turbinator. The inferior turbinator lies along the superior maxillary, below its union with the nasal. Neither of them can be separated from the bony parietes of the cavity by maceration, but they are too readily broken off in our dry preparations. A prolongation of the lower turbinator extends over the inner ala of the false nostril, and may be readily seen by lifting the nostril. It has, sometimes, been mistaken for a morbid tumour, or minute polypus. The hollow pedicle which runs down thus far has no outlet, but seems designed to give support to the inner ala of the false nostril. Comparative anatomists speak of the connexion between the two turbinated bones, but I have never been able satisfactorily to trace it.

In the *Ruminants*, the inferior turbinated bone is more developed, and particularly in the *sheep*, so as to fill up, as it were, the whole of the cavity, accounting for the readiness with which that animal is *blown*

when he is a little hurried. In the *dog* this bone is very small, but is curiously complicated. We need in him both speed and scent; this bone is also unusually convoluted, and the nasal cavity is left more open.

The Meatus.—You will perceive that these bones form the cavity into three distinct meatuses or channels; the superior one lies between the superior turbinated one and the nasal bone, constituting the roof of the cavity, and it even extends above, and by the side of the æthmoid bone, to the cribriform plate, and it is closed at its superior termination. It is defended from the access of the external air, or at least from any violent current of air, by the development of the false nostril at its lower part. It is an interposed space to defend the æthmoid bones from injury if the nasals should be fractured; and the air, loitering as it were in it, and being longer in contact with the sensitive membrane by which it is lined, contributes to the acuter sense of smell. It is the portion of the cavity more particularly devoted to the sense of smell. You will not forget the use you may make of it in fracture of the nasals; an elevator may be introduced below, or the trephine may be applied through its whole extent.

The central meatus lies between the two turbinated bones. It receives every natural or morbid discharge from the maxillary and other sinuses, for there is a valve-like opening into these sinuses, two-thirds of the way up the meatus, and under the superior turbinated bone. There is only one spot, pointed out to you by these preparations, at which the trephine could possibly be applied.

The largest channel is along the floor of the nasal cavity, under the inferior turbinator, and extending from the anterior to the posterior termination of the cavity. It is the proper air passage; and because it has this important function it is out of the reach of injury or violence, and is not clogged by any discharges but those that proceed from the respiratory tubes beyond the nostril, or an exceedingly unfrequent regurgitation of matter from the stomach. The distinct offices of these channels, and their different construction, admirably adapted for the performance of each, deserve your attention.

The Maxillary and other Sinuses.—When the superior turbinated bone is removed, the maxillary sinus, of which I shall have to speak under another system, is exposed, or rather becomes a portion of the nasal cavity. With the maxillary sinuses, the frontal, the superior æthmoidal, and the sphenoidal in the horse, and in the ox, the palatine cells communicate. Altogether they form a vast hollow, and, under some diseases, and particularly under glanders, contain a great quantity of purulent or other fluid. The maxillary sinus freely communicates with the others, and it opens into the nasal cavity under the superior turbinated bone.

The Lachrymal Duct.—This is the channel through which the superfluous tears are conveyed to the lower part of the nostril, and it is exposed to view when the superior turbinated bone is removed. There is, behind the tubercle on the lachrymal bone, varying in size in our different patients, and which will be more particularly described when we treat of the age, a funnel-shaped depression, into which the superfluous fluid of the eye is received through the puncta on either side of the caruncle. I will not detain you by entering into the dispute whether the membrane by which this funnel is lined is a proper sac, but it is at least an enlargement of, or the most capacious part of the lachrymal duct, and to a person possessed of common eyesight it is plainly enough a sac.

A long canal here commences, and runs down the lachrymal, and along the maxillary bone, very small, and with difficulty admitting any probe. Passing over the maxillary it takes a direction a little superiorly, so that it must not only be a small but a flexible probe to pass through it. About an inch and a half down the maxillary, and not more than half and inch from the foramen infra orbitarium posteriorly, and a little superiorly, it enlarges, and becomes membranous, and is continued downward until it terminates on the inner and inferior part of the nostril, below the proper lining of the nostril and on the cuticle. It terminates on the cuticle, that the highly sensitive membrane of the nose may not be excoriated by the tears, occasionally rendered acrimonious, in inflammation of the eye. The oval termination of this duct is easily brought into view by lifting the nostril.

We shall have, by-and-by, to speak of a disease, which is characterised, in its later stages at least, by ulceration of the Schneiderian membrane, and ulcers of a cancrous nature assuming a definite rounded or oval form. Take care that you do not mistake this for one of them, or pronounce a healthy horse to be glandered, because, for the first time, you happen to observe the termination of this duct. It is a mistake that has been made by many a good horseman, and even by some veterinary surgeons. A little while ago I was sent for in great haste by the coachman of one of our four-in-hand gentlemen. I found him in sad tribulation; one of his master's best horses was glandered, and the disease would run through the whole team. It was the first time that this aperture had attracted the attention of a man who would not have yielded to any one in pretension to horse knowledge. I knew

one of your brethren, who would otherwise have passed a very good examination, but he happened, unfortunately, to say that the nasal duct opened on the Schneiderian membrane, and he was turned back on this point of practice.

FISTULA LACHRYMALIS.

From some occasional acrimony of the tears the membrane lining this duct may inflame and thicken; or some foreign body may insinuate itself into the duct; or some uncteous matter from the ciliary glands; and the fluid accumulates in the sac and distends it, and it bursts: and the ulcer eats through the integument, and there is a small fistulous opening beneath the inner canthus of the eye, with a constant discharge from it. It is the constant discharge from it that prevents the wound from healing, and, in some cases, the lachrymal bone is involved in the ulcerative process, and becomes carious.

This happens so seldom in the *Horse*, that the existence of fistula lachrymalis has been denied in him, but there are cases of it on record, and there are few who have not seen the enlargement of the sac preparatory to it; viz. the soft tumour evidently filled with fluid, easily pressed out, and escaping either from the eye or through the nose. When this has been neglected, and the fluid has become viscid, inflammation and ulceration and caries have ensued.

Our continental neighbours, who are very ingenious in devising plans of treatment for various diseases which I believe even they would find it difficult to carry into execution, have told us to inject some bland tepid fluid through the lower punctum, and thus cleanse the sac from obstruction; but I have not been told the means by which I shall accomplish this in spite of the powerful action of the retractor muscle. This being ineffectual we have been advised to pass a style, as in the human being, into the duct; but I should be puzzled how to introduce this style, whether through one of the puncta, or through the orbicularis muscle, or by making a way for it through the lachrymal bone into the lower part of, or below, the sac, and I should be more puzzled still to make my patient, who would not do as I bade him, keep the style in its situation a single hour, much more the length of time necessary to ensure the pervious state of the duct. I believe that you must leave the case to itself, paying attention only to cleanliness.

In the *Dog*, however, and particularly in the smaller spaniel with the watery eye, fistula lachrymalis is of no unusual occurrence. You will recognise it by the small ulcer in the situation that I have described, with a constant, but perhaps slight, discharge of pus. Have nothing to do with that ulcer, for you will never heal it. You will gain most reputation by honestly saying at once, "I can do nothing here." There is even no palliative but cleanliness.

When fistula lachrymalis occurs in the horse, it is oftenest from fracture of the lachrymal or superior maxillary bone; but that can rarely happen in the dog on account of the depth of muscle by which the parts are protected. In him it arises from disease of the eye, or a naturally inordinate secretion of tears.

With regard to the *canalis infra-orbitarius*, or the long canal conveying the anterior maxillary nerve to form the *facial nerves*, I will content myself with pointing out its situation and course from the hiatus at the tuberosity of the superior maxillary, to the upper part of the middle portion of the facial surface of that bone.

LECTURE IV.

THE NOSTRILS AND THE SCHNEIDERIAN MEMBRANE.

The Nostrils.—The nasal cavity on either side gradually diminishes anteriorly, and at length terminates in an irregular ovoid orifice on either side. The triangular spaces between the nasal and anterior maxillary bones are filled up by elastic cellular substance and integument, and which are supported by these bones, and by two cartilages on each side. The face gradually diminishes towards the lower part. The broad muzzle of the ox would be an unsightly termination of the face of the horse; in consequence of this the external nostrils are correspondingly small, and they seem barely large enough for the purpose of quiet and undisturbed breathing. But we often exact from the horse a great and a cruel exertion of speed, accompanied by a corresponding expenditure of animal power, and this demanding an equivalent supply of arterial blood, and that to be obtained only by a proportional admission of air into the lungs.

The apparently contracted nostril of the horse would not admit of sufficient air to arterialise the blood, and support the rapidly-exhausted contractility of the over-worked muscular fibre, were there not a beautiful apparatus of soft distensible parts, and cartilage and muscle occasionally to expand the nostril, and admit the increased quantity of air which the animal may demand. Attached to the soft parts composing the nostril are several powerful muscles, which serve to expand these orifices, and there are two cartilages on each side, which, while they admit of the expansion of the nostrils, restore them again to their natural dimen-

sions by their inherent elasticity. The cartilages are attached to and supported by the points of the nasal bones. There are two larger ones superiorly, and two smaller and lunated ones below. They give form to the nostril in the natural state of breathing, and likewise in the act of increased respiration, and, the muscular power which dilated them ceasing to act, they bring the nostrils back to their original dimension and form.

The Muscles of the Nostrils.—The principal muscles concerned in expanding the nostrils are the *transversales* (*dilatatores nasi anteriores*) that can scarcely be said to have any proper origin, for they are bound down on the point of the nose, and are inserted into each of the cartilages. When they act they draw these cartilages towards the centre of the nose, and so expand the nostril in that direction. These muscles are not found in the hog, to whom they could be of very little use. Then there is the *dilatator lateralis*, proceeding from the point of the ridge of the superior maxillary, and inserted on the outer side of the nostril. This muscle will draw the side of the nose outwards and backwards, and so dilate the nostrils outwardly. Both these muscles acting together, and dilating the nostril both outwardly and inwardly, will very considerably enlarge the external orifice. The dilatator lateralis is an exceedingly powerful muscle in the hog, to give flexibility to his nasal spade. The absence of the former, which could scarcely be useful to this animal, and the extraordinary size and strength of the other, are pleasing illustrations of the adaptation of animals to their situation and destiny. Another muscle, the *nasalis longus*, comes from the union of the superior maxillary and malar bones, and is partly inserted into the false nostrils and dilate them.

The False Nostrils.—These are singular contrivances. They are duplicatures of the skin, but thinner and more flexible; they are blind pouches or bags which fill up the lower side of the nostril. Their use has never been satisfactorily explained. In some measure they give additional expansion to the nostril, but when examined more closely, they serve, and particularly in laborious breathing and when the current of air would be exceedingly strong, to divert it from the superior meatus, the peculiar seat of smell, and the most sensitive part of the nostril, and where its violence might be injurious, and to direct it into the lower meatus, whence it will more readily find its way to the trachea and lungs.

Another muscle by which the nostrils, both true and false, are expanded, is the *levator labii superioris alæque nasi*, from the superior portion of the nasals, and even from the frontal bones to the upper lip, and to the skin of the nose, and the false nostrils. This muscle is not found in the hog, for in the construction of his muzzle it would be powerless.

The *nasalis brevis* is a triangularly-shaped muscle, occupying the unattached sides of the nasal bone, and of the opposite and corresponding border of the anterior maxillary, and connected with the whole of the interposed substance of the soft nostril; evidently tightening this substance, and so somewhat enlarging the orifice of the nostril, but more employed in supporting it, and preventing it being too much dilated. This is a muscle of little development and power in the *sheep* and *hog*, and not found in the *dog*.

All these muscles are employed in dilating the nostrils, and, in rapid progression, they have as much as they can do to dilate them sufficiently. Where are the antagonists? we find them only, and we find them of sufficient power, in the elasticity of the soft nostril generally, and more especially in that of the cartilages.

The Difference of the Nostrils in Different Breeds of Horses.—All these parts are more developed, the cartilages are larger, and the integument is thinner, and more flexible, and the muscles are more powerful in proportion as the horse is formed for speed. There is not a more marked characteristic of the blood-horse than an expanded nostril. There is scarcely a more interesting object than his dilated nostril when he is sufficiently excited but not overblown; on the contrary, there is nothing so painful to observe as the spasmodic dilatation of the nostril, and the painful working of every muscle when the horse of no blood is pushed beyond his natural power. If you have ever contemplated the sudden lighting up of the countenance of the hunter, when his ears become erect, and his nostrils dilate as he first hears the cry of the hounds, and snorts and scents them afar off, you will be aware of the beauty and the use of an expanded nostril. Take the first opportunity of comparing together the confined nostril and thick skin, and quantity of cellular substance about the muzzle of the cart-horse with the far wider and more flexible one of the blood-horse.

The inhabitants of some countries were accustomed to slit the nostrils of their horses that they might be less distressed in the severe and continued exertion of their speed. The Icelanders do so at the present day: but there is no necessity for this, for nature has made ample provision for all the ordinary and even extraordinary exertion we can rationally require from the horse according to his breed and character.

The muzzle of the *ox*, not designed for speed and incapable of the continued exertion of it, offers a singular contrast, especially connected with the different function of

the upper lip in that animal, viz. firmly to hold the food until it is torn off, not perfectly cut, by the pressure of the lower incisors against the pad which supplies the place of teeth in the upper jaw. In the sheep and swine no provision is made for speed, but as I have already observed, it is secured in the dog, by the expanded and circular aperture of the nostril.

The cavity of the nose is lined throughout by a soft thick membrane, extending from the common integument through its whole extent.

Of Membrane generally.—As this is the first membrane which has presented itself to our consideration, I must say a few words of the nature and structure of membrane generally. It is that portion of the frame which is the basis and mould of all the rest. It is diffused over the whole frame. It composes the tissue in which the earthy matter of every bone is deposited, and constitutes the main bulk of every bone. It encloses every muscle as its external sheath; it enwraps every bundle of fibres, every individual fibre, and, perhaps, the ultimate fibre may consist of condensed membranes. I will not detain you with any theory of its own ultimate structure, whether solid or vascular; each has its supporters; while a third party maintains that the fibre of the membrane is alive; is composed of innumerable living beings. I will not detain you with this, but proceed to observe that the tendons are composed of flattened plates of membrane; the ligaments of membrane otherwise arranged; the cartilages, terminated, defended by, made up of membrane; the brain enveloped by it, and formed of it; the nerves surrounded by it, every fibril coated with it; the nervous substance seemingly fibrous; and, the properties of membrane being cohesion, extensibility, and elasticity, the bladder, the stomach, the heart, the arteries, the integument, composed of it, and illustrating the qualities of it.

Nor will I detain you with the chemical history of membrane; or its division into cellular, or adipose, or fibrous, or serous; these will in turn come before us, but content myself with observing, that this is a *mucous* membrane, so called from the fluid discharged from its vessels,—a true secretion;—every mucous membrane supplied with innumerable glands; lining those cavities which communicate with the external air, as the mouth, the respiratory passages, the digestive; apparently far more important than the serous membranes; the serous in many cases being only designed to prevent friction and facilitate motion, while the mucous membranes are generally connected with important functions—the mouth with taste, the nose with smell, the stomach with digestion, and the intestines with nutrition; possessing more blood-vessels, more nerves, consequently more prone to disease, and disease of a particular character; inflammation in one taking on an ulcerative character, the other accompanied by effusion and adhesion; one involving, by intercommunication of nerves and vessels, surrounding parts; the disease of the other strangely peculiar to itself—peritonitis running its course without affecting the mucous membrane of the intestines, the mucous membrane seldom long or violently inflamed, without involving the peritoneal; inflammation of a serous membrane rarely accompanied by prostration of strength; that of a mucous membrane speedily followed by debility.

The Schneiderian Membrane.—The mucous membrane lining the nose is continuous with that of the sinus with which the nasal passage communicates, and with those of the nasal duct, the lachrymal sac, the conjunctiva, the membrane of the pharynx, the trachea, the air-cells, the mouth, the tubes of the parotid and submaxillary glands, the Eustachian tubes, the tympanum of the ear; the œsophagus, the stomach, the intestines, the biliary and pancreatic vessels, the urinary and genital passages.

The Schneiderian membrane may be considered as presenting two surfaces, an adherent and a free one; the adherent being very firm, with difficulty separated from the bone beneath, and forming a kind of periosteum to the bone. Lying on this is a reticulated mass of blood-vessels and nerves, particularly on the septum, and the æthmoid and superior turbinated bones. There is no part of the frame more vascular. On this is the free surface, covered with a mucous fluid to protect it from the painful or dangerous influence of the air, the food or other foreign objects, and being a kind of factitious integument, particularly beneficial in the respiratory passages subject to the injurious influence of sudden change of temperature or stimulating gases, and in the intestines, defending them from the occasional acrimony of some of the ingesta. When this membrane is carefully examined there are numerous minute rounded apertures, irregularly distributed, most plentifully on the lower part of the septum, and on the inferior turbinated bone—smaller, and scarcely to be traced on the upper part of the septum, or on the æthmoid bone: given mostly where there is most exposure to injury. Superiorly it is comparatively devoid of mucus, that the olfactory nerves and the lateral nasals may ramify with more effect, and be more sensible to impression. When the intermediate substance is traced with great minuteness, it is found to be glandular; but not composed

of distinct glands, or even of the smallest granulations, but a bed of glandular matter. The natural discharge is limpid, small in quantity, and scarcely seen at the nostril. Under inflammation it becomes increased in quantity, thickened, opaque, and even purulent, and that either with or without ulceration.

In the convolutions of the æthmoid and turbinated bones, and in the sinuses of the face and head, the membrane is thinner, more delicate in its structure, and the mucous secretion lessened in quantity. These parts are out of the reach of danger. No current of air blows upon them—no foreign body can injure them; and, their function being limited, they have fewer blood-vessels and nerves; the membrane is more easily torn from its attachment, and it possesses comparatively little sensibility. Although the function of these sinuses and their membranes is imperfect, it seems to be of a double character. The voice is affected by the sinuosities of the passages, and the air lingering in them, the sense of smell is possibly more acute and faithful.

These are mucous membranes. Then their first and distinguishing characteristic under inflammation is, increased mucous secretion, and that often assuming a purulent form. This increased secretion, under inflammation, is a beautiful provision of nature: it warns us of the presence of the evil, it relieves the engorged vessels, and it covers and defends them from those painful impressi ns to which their increased sensibility would expose them.

The mucous membrane of the nose, although smooth and soft, is covered by innumerable papillæ. On the superior portion of the nasal cavity, both on the septum and the æthmoid bone, they are particularly evident. These have nothing to do with secretion or exhalation; they are connected with the sensation of the part; they are the terminations of the nerves, whether of peculiar or common sensation. These papillæ are smaller than in most mucous surfaces—small indeed when compared with those on the tongue. Continually exposed to rapid currents of air, and to the influence of pungent gases, and to extreme variations of temperature, little common sensibility was wanted, it was only needed that the sense of smell should be acute in a degree corresponding with the situation and habits of the animal. If the papillæ, however, are not large, they are more numerous than on other membranes, the olfactory nerve is more spread over the surface then terminating in fibriculi.

The nasal cavity is plentifully supplied with blood-vessels, and particularly from the lateral nasal branch of the internal maxillary artery, which enters through the æthmoidal cells, to be distributed chiefly over the membrane of the septum. Other branches ramify on the æthmoid and turbinated bones; and the lower part of the nostrils is indebted to the facial artery and to the palato maxillary.

The Schneiderian Membrane, as indicating Inflammatory Action in the Respiratory Passages.—The mucous membrane of the nose is distinguished from other mucous surfaces, not only by its thickness but its vascularity. The blood-vessels are likewise superficial; they are not covered even by integument, but merely by an unsubstantial mucous coat. They are deeper seated indeed than in the human being, and they are more protected from injury, and therefore there is far less hæmorrhage from the nostril of the horse than from that of the human being, whether spontaneous or accidental. Lying immediately under the mucous coat, these vessels give a peculiar, and to us a most important tinge to the membrane, and particularly observable on the septum. They present us with a faithful indication of the state of the circulation, and especially in the membranes of the other respiratory passages with which this is continuous.

We lack many of the auxiliaries of the human practitioner. Our patients are dumb; they can neither tell us the seat nor the degree of pain, and our blunders, unfortunately for us, sometimes, are never buried with the patient. Well, we must use greater diligence in availing ourselves of the advantages that we do possess, and we have some, and very important ones too. The varying hue of the Schneiderian membrane is the most important of all, and, with regard to the most frequent and fatal diseases of the horse, those of the respiratory passages, it gives us almost all the information with regard to the state of the circulation in those parts that we can possibly require. Veterinarians, too, generally overlook this. It has not yet been sufficiently taught in our schools, or inculcated in our best works on the pathology of the horse.

It is the custom with most veterinary surgeons, and almost with every horseman who will take any pains to ascertain for himself the state of his sick horse, to turn down the lower eyelid and to form his opinion of the degree of general inflammation by the colour which the lining membrane of the lid presents. If it is very red, he concludes that there is considerable fever; if it is of a pale pinkish hue, there is comparatively little danger. Why, this is a very important examination, and the conclusion which we draw from it is generally true; but on the septum of the nose we have a membrane more immediately continuous with the membranes of the respiratory organs—more easily got at—presenting a larger surface—

the ramifications of the blood-vessels better seen, and, what is truly important, indicating not only the general affection of the membranes, but of the membranes with which we are most of all concerned.

Let me urge you to attend more to this. Study the character of that portion of the membrane which covers the lower part of the septum; that which you can most readily bring into view. Day after day, and under all the varying circumstances of health and disease, study it, until you are enabled to recognise, and you soon will, and that with a degree of exactitude you would have scarcely thought possible—the pale pink hue when the horse is in health and quiet,—the increasing blush of red, and the general and uniform painting of the membrane, betokening some excitement of the system,—the streaked appearance when inflammation is threatening or commencing,—the intensely florid red of inflammation becoming acute,—the starting of the vessels from their gossamer coat, and then seeming to run bare over the membrane, when the inflammation is at the highest,—the pale ground with patches of vivid red, showing the half-subdued, but still-existing fever,—the uniform colour, but somewhat redder than natural, indicating a return to a healthy state of the circulation,—the paleness approaching to white, indicating a state of debility, and yet some radiations of crimson, showing that there is yet much irritability, and that mischief may be in the wind,—the pale livid colour warning you that the disease is assuming a typhoid character,—the darker livid announcing that the typhus is established, and that the vital current is stagnating,—and the browner, dirty painting, intermingling with and subduing the lividness, and telling you that the game is up.—Study these things, Gentlemen, they will be guides to your opinion and your treatment, which you can never too highly appreciate.

Horses Food.—Barley was the ancient food for horses, the discovery of oats being comparatively of modern date. In the North of Holland, they feed their horses principally on black, sour bread, made of buck wheat, (and there it is eaten also by a large share of the inhabitants,) for which purpose, they alight from their vehicles, and, without taking the horses out of their hempen traces, cut it in slices, and give it to them to eat. They appear relaxed by it, but apparently it does not debilitate them, as they seem to do their work very well.—*Cyclo.*

ST. THOMAS'S HOSPITAL.

CLINICAL LECTURE

BY

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Delivered November 28th, 1831.

WORMS IN THE ALIMENTARY CANAL.

There has only been one important case, Gentlemen, presented among the women, for the last fortnight, namely, that of a person named Mary Watkins, admitted on the 3rd of November, aged forty years, and who represented herself as having been ill twelve months.

You will find the case interesting as illustrating this fact,—that a large number of cases may be ascribed to worms, without any good reason. I have continually seen persons labouring under various diseases, such as epilepsy, St. Vitus's dance, headache, during which worms have come away without any relief whatever to the patient, and where worm medicines had been given with success, so far as the relief from the worms is concerned, but without any mitigation of the original complaint. There can be no doubt that many diseases will arise in particular instances from worms, but I believe they are not by any means so numerous as was once imagined. In fact, worms most frequently arise from disease of the system. The system being out of health, it becomes more easily their prey, and they breed in spite of the living power of the system.

Now this woman complained of pain in the forehead, throbbing, and heat, all of which were worse in bed. As the pain of the forehead was attended by throbbing and heat, and was worse in the recumbent posture, I had no doubt that it was of an inflammatory character. If you ever have throbbing in the head when there is pain, and stooping or the recumbent posture makes the pain worse, and the patient is better from being kept upright, and more especially if these symptoms are accompanied by drowsiness, giddiness, or a sense of weight in the forehead, or a sense of tension there, then you may be sure that the disease is inflammatory, and, indeed, within the head, not at the external part. If it be the pericranium or scalp, you have tenderness on pressure, and if it be of a rheumatic character, you generally not only have tenderness on pressure, but pain ex-

tending down the face. When, however, it is an affection within the head, you seldom have it extending below the cranium itself. When this patient came in, she had not had a stool for seven days. That is very common when the headach, as it is called, is situated *within* the head. It is also to be remembered, that she had tinnitus aurium, but that I should not suppose was so much connected with the other symptoms, as it was an independent affection of the ear itself; for one ear had discharged. The stomach also was disordered equally with the head; for she had nausea and vomiting, chiefly at night, and this vomiting sometimes consisted of black blood. She had also another symptom very common in derangement of the stomach, that is, pains of the extremities in the calves of the legs. It is very common with acidity of the stomach for cramps to take place in the calves. It is very common in dyspepsia for persons to have dull pains in various parts of the extremities, and you know that in one of the severest affections of the alimentary canal, viz. *cholera*, the pains and spasms of the extremities are exceedingly dreadful.

The state of the head might have been supposed to give rise to the derangement of the stomach. There was, however, black vomiting. If there had been mere vomiting, one might have ascribed it to the state of the head, but as the vomiting was of black blood, we must believe that there was congestion in the abdomen, and that in all probability gave rise to the symptoms in the head. She said she had discharged a *lumbricus* from her intestines three months ago, and when you do find worms, it is but rational to expel them. I gave this woman one ounce of oil of turpentine, which was followed in two hours by half an ounce of castor oil,—the latter being repeated until purging took place.

Oil of turpentine was first found to be efficacious against tape-worms, but I believe it is just as efficacious against every other kind of worm, whether they be lumbrici or ascarides. The largest dose of this medicine is perhaps from three to four ounces. I have heard of people exhibiting four ounces, but I never gave more than three myself, and in the case of females I should never think of giving at first more than one ounce. In fact, half an ounce is better in the first instance. This woman had had no stool for seven days, and I was therefore not afraid of giving her an ounce, and even that took no effect, until the castor oil was exhibited. It is better to give the castor oil after the turpentine than with it; an ounce of the one, and half an ounce of the other, make a nauseous dose, and it is seldom that it will remain on the stomach. It is better to give the turpentine and follow it in two hours with castor oil, there then being much less chance of its rejection. The bowels are generally relieved by the first dose of castor oil, but if not, you may follow it up every two hours, as you would in any other case. In this patient the medicine operated well, but no worms came away. I was not satisfied on this account that she had no worms, because you may frequently exhibit oil of turpentine where there are worms, and yet none will come away from the first dose. Sometimes they will not be evacuated until a day or two after, and sometimes not until the medicine has been repeated two or three times. However, the woman had been freely purged by castor oil, and yet the pain continued very severe, so that it was necessary to relieve her in some other way, and I therefore bled her to a pint, and she was to be regularly purged with senna and salts every day. The blood I found was buffy, showing an inflammatory state of the system. In her the symptoms were of an inflammatory character, and as the blood proved cupped there could be no doubt that they really were inflammatory. From this treatment her health became better. In fact she was better altogether, but yet no worms were discharged. Still, however, some headach remained, and there being tenderness at the epigastrium, ten leeches were applied to the head, and the same number to the epigastrium, and in a day or two she was perfectly well. No other treatment was required, and she recovered without the removal of a single worm.

Now, of these symptoms, nausea and vomiting, I will not say the vomiting of blood, but the pain of the forehead, the throbbing and heat of the head, all might arise from worms,—they all will do so in some instances: but although this woman had expelled a worm three months ago, and there was a possibility or some little probability of worms having been the cause of the symptoms, yet no more subsequently appeared, and she went out quite well on the 24th of this month.

The idea of many people as to the existence of worms is carried a great deal too far. If a child has a big belly, eats too little or too much, and picks its nose, it is said to have worms. Whether there be worms or not, these symptoms will most likely vanish after steady purging. They arise from congestion of the abdomen, and if they will not give way to purging, they generally will to leeching. In a great number of cases where worms are suspected, you will find none come away, although means are taken for that particular purpose also; and, on the other hand, you frequently see worms without any inconvenience having

been produced. Worms will exist with far less inconvenience to the patient than is felt every day where there are no worms at all. Continually in cases where symptoms of worms have existed, and worms have been brought away in great abundance, so that a certain degree of relief was expected, I have nevertheless found it necessary to have recourse to the ordinary treatment of affections of the alimentary canal.

ST. VITUS'S DANCE.

There were two cases presented, Gentlemen, of which I will now speak,—cases of St. Vitus's dance, a disorder which you will continually see in this hospital. These cases occurred in Jacob's ward, and both the subjects were boys. The greater number of cases of this disease occur in girls. I should think one-third or one-fourth more occur in girls than in boys. The boys were of the usual age at which the disease makes its appearance; that is, between the fourth or fifth year, and the age of seventeen or eighteen.

Case 1.—One of the patients was eleven years of age, and was said to have had the disease only three weeks. He had experienced an attack of the same kind about two years ago, which then lasted for three months, and, indeed, had never been perfectly cured since. The disease, however, was now a great deal worse than it had been in the first instance. You might have perceived in this boy what is the case in by far the greater majority of cases; viz. that there were no other symptoms whatever, than the agitation of the body. There were no symptoms in the head, nor any in the chest, nor in the abdomen. A very few of these patients have an inflammatory state of the head; some have congestion and inflammation within the head, but, certainly, in the greater number of cases, there is no such thing. Now and then you will have a patient with giddiness or pain in the head, but these things, if they do occur, are for the most part only transient. Upon one occasion, however, I knew a patient die apoplectic while labouring under St. Vitus's dance. There is in nineteen cases out of twenty no symptom in the head unless that the patient looks a little idiotic.

As to the abdomen. We have been told that the disease always arises from the stomach, that it arises from worms, or a collection of fæces, or torpor of the bowels, or depraved, unhealthy, secretions. Now I cannot say that I often meet with these occurrences; for the most part the abdomen is not tender; for the most part the appetite is very good, and the secretions are healthy enough. Of course, if you were to inspect the fæces every day, you would find them vary. Sometimes they will, in the best health, present a healthy, and at other times an unhealthy character, according as the food which has been eaten was suitable or not: and purgatives will often cause unhealthy stools, when these were previously quite healthy. In a great number of cases there are no signs of abdominal disturbance. Children are at all times apt to be costive, and patients labouring under St. Vitus's dance are liable to be in this condition, but not more so than other children; at any rate, not those who come under my care.

From the torpor of the bowels a practice has been advocated of giving purgatives to a great extent, but I have never found this necessary. I have purged patients, over and over again, without their being at all improved by it. Of course, some cases will get well under purging, for some cases will get well if you do nothing or any thing. Sometimes in a case of fracture occurring in a child the bone will unite, and the limb be perfectly straight, without a bandage having been applied. Although, however, that is sometimes the case, yet it is the duty of practitioners never to trust to chance.

I have, as I just now stated, given purgatives over and over again without any satisfactory result; but on adopting another plan of treatment the patient has immediately got better. Still there can be no doubt that these are frequently useful, it being always necessary to attend to the bowels.

Now this boy had nothing the matter with his bowels, and I therefore ordered him two drachms of sub-carbonate of iron, every six hours. His diet was to be that of other people. I never find it necessary to pay any attention to diet, for children eat and drink as though nothing were the matter with them. He was admitted on the 13th of October, and on the 28th, as there was no improvement manifested, I, on that account, increased the dose to half an ounce. On the 4th of November he had been a great deal better, but was then not quite so well. You will find this a very common thing in the disease. Once or twice in its progress patients will become much worse, but that is for the most part only temporary; at least, if you persevere in your plan. On this account I increased the frequency of the dose, and as the boy was fond of it—loved his medicine dearly—it was given every four hours. He was presented on the 17th of November quite well. I gave him medicine for ten days, to take with him, because it is right to continue it for some little time after the complaint has been cured. He was here on Friday last, and if you looked steadily at him for a length of time, you might perceive a slight movement, but such as you would not notice

unless you knew the patient had previously had the disease. It was not so bad a case as one frequently sees, but still it was rather severe. He came in making all sorts of antics. His head moved about in all directions, and his extremities were in perpetual motion.*

Case 2.—The other case occurred in a boy ten years old. He had been ill ten months, and in him it was a far more local affection than in the last patient. It chiefly affected the face and head. His head would be drawn considerably aside, and he grinned with the same side of his mouth. However, I understand that it had once affected the whole body. He had had a stool only every two days. But notwithstanding that, from the experience I have had in the disease, I did not think it necessary to give him purgatives regularly, but only now and then, whenever his bowels were particularly torpid.

He came in on the same day as the other boy, and took the same doses of iron—that is, two drachms every six hours in double its weight of treacle. That is the way in which I always give it. The carbonate of iron is a dry astringent remedy, and would confine the bowels if you were not to give it in treacle. Treacle, however, is sufficiently purgative to counteract its effects, and he presently had a stool every day. On the 4th of November, as he also liked his medicine very much, and his head was still drawn aside, the frequency of the dose was increased to every four hours instead of every six, and he soon became all but well; in fact so much better, that he went out on the 17th of November, taking enough medicine with him to last for ten days. He came again last week, and I observed but a very slight motion of the head. The disease certainly was not entirely cured, there being just a shade of it left. If he continues to take the medicine, I have no doubt the complaint will entirely disappear. Some say, that if children be purged well first, the iron takes more effect upon them; but I cannot say that such is the result of my experience. I have more than once seen in this disease a degree of headach, a little drowsiness, and some trifling signs of fulness of the head, disappear under the use of the carbonate of iron, together with the other symptoms, so that for them when occurring in a slight degree, it is not necessary to purge or take away blood. In one case of this description I saw hemiplegia, and in several cases I have known epilepsy occur, but all these have disappeared under the carbonate of iron, without the application of leeches, or the exhibition of purgatives. I am quite sure that this is usually a disease not of inflammation, not of congestion, but, generally, of mere morbid excitability of some part of the nervous system, that part which is connected with the origins or terminations, whichever you choose to call them, of the nerves of voluntary motion. It is the nerves and muscles of voluntary motion that are affected, and that takes place from the head to the foot, for the corrugator supercilii is just as much affected in this disease as are the muscles of the hands or the feet. Hence the disease cannot be seated low down exclusively in the nervous system. My reason for arriving at this conclusion is, the usual absence of all signs of inflammation and congestion, and the removal of the disorder so satisfactorily by remedies not at all calculated to remove an inflammatory or congested state. Indeed, for the most part, there is debility in the disease. Patients are pale and languid. However, I may mention that I have seen rosy-faced children labouring under the affection, and it has given way just as readily to iron as in the other case. You might suppose, *a priori*, that if the patient is ruddy, leeches and purging would be the best treatment; but my experience convinces me that this is not usually the case, for those patients certainly improve as rapidly as others under the carbonate of iron.

You will recollect that at the beginning of the season there were three cases of this disease, all occurring in little girls who lay in beds adjoining each other in Mary's Ward, and all three were cured exactly by the same treatment. One might have supposed, that being in each other's sight, the disease might have continued longer,—That it would have been perpetuated from imitation, by the children seeing each other; and the more, as I understand there was a little pleasure in giving way to the motions. At least there is some unpleasantness in resisting them. I was anxious to observe the power of the remedy under the circumstances to which I have just referred, and I found it just as successful as though the children had been kept separate. They got well at the usual time, and I believe all went out on the same day.*

CONTINUED FEVER.

There was a case presented the same day (Nov. 17) of continued fever. The man was admitted on the 3rd instant, and treated in the way in which you see all my patients

* The boy has since shown himself at the hospital perfectly well.—Rep. L.

* The father of this patient came to the hospital to say, that the boy had experienced an attack of fever, during the excitement of which, and the necessary suspension of the remedy, the disease had returned.—Rep. L.

treated here, namely, leeches to every part where there were signs of local inflammation taking place, and a very moderate affection of the mouth produced by means of mercury: the cleansing of the body as soon as he came in, the application of cold or tepid water whenever he was hot, and the application of cold to the head when the temperature was above the natural standard, with a mild diet. After a short time, milk, and, if requisite, strong beef tea are given. Under this plan you have seen every case of fever under my care cured, and this man did perfectly well. I will not go through the treatment of the case, because there was no variation of it, nor in my usual mode of combating the disease. You will recollect that in this man, just as in others, there was no reason to suppose contagion. The affection appeared to come on from a vicissitude of temperature, from his being exposed to cold and wet when he was heated.

JAUNDICE.

There was presented in William's Ward a case of jaundice, which was interesting on many accounts. The man had the usual symptoms of the disease,—yellowness of the surface of the body, especially of the conjunctiva, and of the roots of the nails, white stools, and the urine of the colour of porter. If you turned the vessel a little down, so as to see its interior through the urine, only a small portion of fluid lying between the atmosphere and the side of the vessel, the urine was to be seen of a strong yellow colour. These are the common symptoms which make up the disease.

In this man I could find no tenderness on pressure; I could find nothing to explain the affection. In many cases the jaundice is merely the result of an inflamed state of some portion of the liver,—I presume some parts especially about the ducts, because some persons have violent hepatitis every day without jaundice occurring. Now this man had no tenderness that could be discovered, nor had he any pain as though gall-stones were passing. The disease was of recent standing, and therefore I had no reason to suppose that it arose from an organic affection of the liver. Frequently where it arises from that source, the colour is not, as you observed it in this man, of a bright hue, but the yellow approaches nearly to an olive green, and when that is the case, I do not believe that persons frequently recover from it; at least I have never seen a patient recover under that particular form of jaundice. The man, as I have stated, was admitted on the 3rd of November, and the account given by him was, that he had been ill twelve days, and had been seized with rigors and general pain. On the 4th day he had two or three stools of an unhealthy character. He had pain at the epigastrium, in two days after which the jaundice appeared. The pain ran down the legs, and he vomited, and at first expectorated some liquid blood. However, when he came in, he had no sign of inflammation left. I found that he had had mercury given him, and his mouth was sore, but the jaundice was no better. The pains, too, had gone before the mercury affected him. From the disease being an acute affection, from having begun with rigors and general pains, I could not help supposing that it was inflammatory, notwithstanding I could discover no tenderness on pressure. I believe that the greater part of acute cases of jaundice, when they arise not from an obstruction caused by gall-stones, and not from sudden spasm at those parts, as shown by gastrodynia, are of an inflammatory nature. It is worth noticing, that the mercury has done him no good, and that you will find to be the case in every instance where mercury is employed and bleeding improperly omitted. Mercury will not take the place of bleeding in inflammatory complaints. The exhibition of mercury I know will render much less bleeding necessary,—will cause the cure to be much more certain, if employed in addition to bleeding. When substituted for it, if the inflammation is severe, it will invariably fail.

The indication in this man was to cup over the region of the liver. His mouth being tender, and he having several stools a day, there was no reason for purging him, nor for the further exhibition of mercury. I gave him *no medicine at all*, but cupped him on the right hypochondrium to a pint, and kept him on low diet. This was on the 3rd of November, and on the 8th he said he was much better in all respects,—not the same man. There was far less yellowness of the skin, and his motions were now of a healthy character altogether, and of a fine yellow colour. On the 11th, he still taking no medicine, but having merely had blood taken from the region of the liver by cupping, the motions were full of green bile, and on the 16th he was perfectly well. You will find that many cases of jaundice give way to mere purgation. Others require, in addition, local blood-letting; sometimes general bleeding, and in addition to that, mercury is often very useful. It is well to purge with mercury, for I know that if you can get the mouth slightly affected, you find these cases get well more speedily than if you adopt simple purgation. I presume this arises from the mercury tending to subdue the inflammation, and cause an absorption of matters which may have produced an obstruction; but this is no reason why, if the case is inflammatory, you

should not bleed: and you will find local bleeding highly important. Many cases of jaundice will arise from a temporary spasm, produced from dyspepsia, or from the patient being exposed to cold. Patients are suddenly seized with what is called gastrodynia; the next day yellowness of the skin appears, and if you open the bowels this all goes off: but if it be not a temporary affection, or if it be inflammatory to any amount, you will find the utmost relief from taking away blood from the region of the liver.

I was not aware of the general use of this when I first began to practise. I had learned that when jaundice was connected with marked inflammation of the liver, it was a good practice to take away blood; but I now know that when there are the least signs of inflammation about the hepatic region, the least tenderness short of decided inflammation —of decided hepatitis—still blood-letting is very important, and if you cannot make out inflammation, yet if the disease commenced with rigors, or pain, and still continues, you are justified in presuming that it is of an inflammatory character, and blood-letting, therefore, should be resorted to. Formerly, numbers of cases of this description were said to be the passage of gall-stones, without any proof whatever. If a person is seized with a violent pain of the stomach and vomiting, without signs of inflammation, this is called the passage of a gall-stone; but unless a gall-stone be found in the fæces, you are not justified in saying that any exists. You know that many persons will be seized with these symptoms on eating particular articles of food—as cheese, and other things, and have actual jaundice, and you have no right to say that a gall-stone is passing; cold and emotions have the same effect without gall-stones.

There are some things said to be useful in jaundice, without any reason for the assertion. Turmeric is said to have been given simply because the jaundice was a yellow disease. For the same reason, dragon's-blood and log-wood were given in cases of hæmoptysis, because they were red, and *the disease* was red, and it was thought they would understand each other very well. However, we now treat hæmoptysis in a more rational manner, and jaundice also should be treated on pathological principles, and not with these empirical substances. There is another remedy in great fashion at the west end of the town, and that is *dandelion*. I very much doubt its power of being useful in jaundice. I cannot believe that it has any effect on it, because, for the most part, acute jaundice is inflammatory or spasmodic; when it is chronic, it so often arises from something pressing upon the ducts, and causes so great a mechanical obstruction, that no one remedy can be supposed to relieve it. At any rate, if this remedy possess *any* power, it should be given in large doses; a decoction should be made by two to four ounces being put into water and boiled down to a pint. *Dandelion* has sometimes been thought to be a diuretic, and, in fact, it would not perhaps otherwise have received the name of "piss-a-bed." I have given it, but I have not been satisfied with its influence on the kidneys. I think it is one of those things which will do if the patient must have something to swallow occasionally, but I am sure it must be very seldom that it is of any great use. It is better to treat jaundice upon more rational grounds and upon general principles. It may now and then do good, but I think it is not so excellent a remedy as has been imagined. I have occasionally stumbled upon a case in which it has been fancied useful, but I do not care if I never prescribe it again.

CHRONIC DYSENTERY.

There was a case presented of chronic dysentery, very satisfactory as to the treatment. The man was thirty-one years of age, was admitted on the 13th October, and had been ill three months. It appeared that he was first seized with the disease in Bengal, two years and a half ago. He was then ill seven months. He was last taken ill at Trieste. When he came in he had a large number of bloody stools. In the twenty-four hours preceding his admission, he had had fifteen such stools. They were accompanied by tenesmus, were of a mucous and bloody character, and were attended with griping. The tongue was clean and moist. There was tenderness, however, of the umbilical region;—there was evidently an inflammatory state of the mucous membrane of the intestines. The tongue, however, did not indicate this. There was no redness either at the side or at the tip. The inflammatory state was clearly shown by the mucous and bloody stools on the one hand, and the tenderness of the umbilical region on the other.

As the disease had existed three months, I did not hesitate to give him astringents, but that would have been bad practice, unless leeches had been applied at the same time. Thirty leeches were placed on the abdomen, and a quarter of a grain of sulphate of copper, with a quarter of a grain of opium, was given three times a day, and he was allowed rice. On the 19th the stools were reduced to ten. There were far less griping and tenesmus. On the 21st he had only one stool in the twenty-four hours. On the 25th there was rather an increase of the stools, and an increase of pain.

These things will arise sometimes without any obvious reason, but frequently they are the result of some error in diet,—very frequently from the patient having been a little exposed to cold. When persons have chronic bowel complaints it is of the utmost importance to keep the surface warm; to have a flannel roller round the abdomen, and the feet should be well protected. The patient should wear thick shoes and woollen socks, and adopt the warmest covering both to the feet and the abdomen. The dose of medicine, in consequence of this aggravation of the complaint, was increased to half a grain of each. On the 25th they were advanced to a grain, and on the 28th to a grain and a half each. The stools then became of a proper figure; he lost all his pain and was perfectly well. I see that the last day on which there was any report, was the 11th of this month, and it is there stated that the stools were perfectly healthy in figure, of a yellow colour, without mucus, but there was a small quantity of blood *on* them, which no doubt oozed from the rectum after the stools had passed. When you see blood merely lying on the surface of the last fæces, you may be sure that it comes from the extremity of the bowels.

He was now allowed two pints of porter daily, in addition to the diet of the hospital, and went away perfectly well, but of course liable to a return on exposure to cold, or any error in diet.

There are two other patients labouring under the same disease, and they are going on satisfactorily under the same treatment. It is necessary to give the sulphate of copper *after* food has been taken into the stomach—that is to say, not to give it when the stomach is empty.

RHEUMATISM.

There was a case presented the same day of rheumatism. The man had been ill ten months, consequently it was of a chronic character, but it was, nevertheless, active rheumatism. The parts were painful and hot, and this I conceived justified me in taking away blood. He was bled to ten ounces, and purged with colchicum.

I never can insist too much on the necessity of carefully distinguishing between the terms chronic and passive inflammatory disease. Here was rheumatism of ten months standing, chronic, but actively inflammatory rheumatism, and yet the parts were hot and painful. From the measures adopted, he soon became much better; and on the 1st of this month, having been admitted on the 27th of October, he was so free from pain that I gave him sulphate of quinine, and he went out on the 17th instant perfectly well.

DISEASE OF THE HEART.

There was also presented a case of affection of the heart, which was just like so many other cases which are seen in this hospital—viz. a violent irregular action of the left ventricle, with dyspnœa and œdema of the legs. The patient lay best on his right side, as they always do in these affections of the heart. On merely bleeding him, and applying leeches from time to time, all the symptoms improved. He had bellows sound, but a great many of these patients have the same, and it will sometimes go away, and sometimes not, but even then the other symptoms will frequently subside. The œdema, too, will also disappear by anti-inflammatory treatment directed to the heart, and the administration of diuretics. You will see many such cases in the hospital at this moment which will do well. None of them will be cured, unless the case is one of mere inflammation, not of organic disease, but life may be protracted. Patients may be able to go about their business, and pursue their usual avocations, for a great length of time. If they commit no error of diet, they may go on for a number of years; whereas, if the treatment had not been adopted which you have seen put in practice, they would have had general anasarca, and effusion into the cavity of the chest. The disease of the heart would in all have increased more and more, and they inevitably have perished. By a very simple mode of treatment, however, you may get them considerably better from time to time, and in that way they will really go on tolerably well for some time, so that those not conversant with these disorders, may probably declare that one was wrong in saying there was organic disease of the heart.

The preceding lecture of Dr. Elliotson, delivered November 28th, is here published out of its course, a lecture having been delivered on the preceding Thursday, Nov. 24th. The lecture ofthe 24th was on a very extraordinary case of double aneurism in the abdominal aorta,—a case so rare, indeed, that the learned lecturer stated he had never seen or read of a similar instance —"the wonder arising from the circumstance, that just below the opening, there proceeded a long neck leading into the second aneurism, larger than the aorta itself, the aorta lying quite insignificantly by its side." A delay in the execution of the engraving which will accompany the lecture, induces the Editor to publish the lecture of November 28th in the present Number.—Rep. L.

THE LANCET.

London, Saturday, December 17, 1831.

THE ANATOMY question is once more before the public, and we are to be treated, it appears, to another "Anatomy Bill," Mr. WARBURTON having given notice that he purposes to bring forward such a measure in the Commons House of Parliament.

Whatever may have been this gentleman's intentions with respect to the interests of science, and the cause of humanity, it must be confessed that his *last* Bill was calculated to promote neither the one nor the other. It was a crude, ill-digested, ill-concocted, badly-arranged document, which would have given additional powers where power had been most grievously abused, and would have inflicted a positive injury upon the large body of medical practitioners, by requiring every physician, surgeon, and apothecary, to take out a license at the cost of two guineas, for the dissection of a single body! Mr. WARBURTON and his coadjutors—his friends amongst the Council in the College of Surgeons, together with his supporters *out* of that body, moving in the circle of "recognised" anatomists, may prove too powerful for a medical Journal circulating to the extent of several thousands, and for adverse opinions proclaimed in public assemblies; but, whatever may be the issue of such a struggle, we give Mr. WARBURTON, and the "recognised" teachers, notice, that if any attempt be made to smuggle through either House of Parliament such an Anatomy Bill as the last, or a Bill proposing to confer new powers upon the old Tory medical corporations—to favour the "recognised" *hospital* schools to the injury of *private* schools,—to bestow advantages and facilities upon the hospital functionaries, to the prejudice of the general body of medical practitioners, and, consequently, to the great detriment of the public—then, we say, we give Mr. WARBURTON notice that we will leave no stone unturned, no effort untried, to frustrate the fulfilment of objects, the accomplishment of which—as we believe him to be a strictly just and honourable man—would, in the end, afford him nothing but anxiety and disappointment for his labours in the cause.

But the "recognised" teachers are at work; they hold meetings—*private* meetings. At one, they agreed to petition the Privy Council to "close the schools;" on a second occasion they repented themselves of such a hasty decision, resolved to "rescind" that resolution, and held another meeting, when it was determined that a deputation should wait upon the Secretary of State for the Home Department, and consult with him on the steps which ought to be taken at the present alarming juncture. Now we must tell these "recognised" teachers, at once, and without equivocation, that they do not come before the public in this matter with clean hands; hence, the less they take part in the question—the less they thrust their faces before the public while discussions are going on upon the horrors of the burking system, the better will it prove for the community, and the more *agreeable*, probably, *for them*. Let it not be supposed that we thus embrace in our condemnation the *whole* of the "recognised" teachers of the science of anatomy. We know, indeed, that there are men amongst them, who would rather never touch gold, than lend themselves to the willing perpetration of any, the most trivial, crimes. But whilst we are free to concede thus much to the characters of the heads of some of our schools, we hesitate not to assert, that at other establishments dead human bodies have been purchased under such flagrantly suspicious circumstances, that the conductors of those establishments can scarcely be considered in any other light than as "accessories after the fact." Let these anatomists,

herefore, keep aloof, and thrust not their unwelcome visages into the council chamber of the KING, or into the Houses of the English Parliament; neither should they present Petitions to those Houses, for it can scarcely be said that their hands are not still reeking with the gore of the victims.

Admitting, for the sake of argument, that the "recognised" teachers stand perfectly free from the charge of having, by their carelessness, facilitated the commission of the "*Burk*" and "*Bishop*" murders, the legislature and the public ought to, and really would, view with suspicion, any measure for the regulation of the schools which should be propounded by such advisers, or be brought forward under their especial protection and patronage. Even supposing that the "recognised" teachers are not notorious as "suspicious characters," Parliament, we repeat, ought to hesitate before expressing its approbation of any measure which these individuals might frame with a view to the regulation of their own matters of trade. "*Trade*," did we say? Ay, truly;—for the "recognised" hospital teachers, prompted and supported by their colleagues and abettors of the College of Surgeons, have not regarded the instruction of medical students as an affair of science and of universal benevolence, but of trade—cold, heartless, *trade!*

It may be well to leave the theatre and dissecting-room, and take the application of the principle which is here contended for, into the other walks of life. If a knot of attorneys, holding high and lucrative offices in our inns of court, were to hold meetings and petition the legislature for the removal of certain abuses of the "courts below," the existence of which had a constant tendency to throw money into their own pockets, and for the institution of some measure of correction proposed by *themselves*,—if, we say, a knot of attorneys, so circumstanced, were to take such a step as this, would the *public* believe in their sincerity, or repose confidence in *their* deliberations? Again, if it so happened that the attorneys moved not in the cause of legal reform, and that the abuses of which they complained had *not* been complained of by them until fully exposed by others, and that the future tendency of the abuses was only to be inferred from the fact, that they had already enabled the petitioners to extort many thousands of pounds from the pockets of the public,—then that public, we think, would have a greater cause to look with suspicion upon the canting protestations of such wily petitioners. However, the application of this theory admits of still further illustration. If the glass-manufacturers of the metropolis were to meet and petition the legislature for the repeal of the tax on glass, would the public believe that they were actuated in their proceedings by a desire to benefit the community or themselves alone? And so on with respect to the members, speaking exclusively, of any profession, trade, or calling. But should the glass manufacturers connect with their petition for the repeal of the existing duties upon glass, a proposition for instituting new regulations for the conduct of the traders in glass, would not the public be justified in examining the scheme with the most rigid scrutiny, and especially if it were known that the disinterested and humanely-disposed petitioners had been detected in repeated attempts to render the whole of the trade subservient to their own pecuniary interests?

This view of the subject at once shows that it is *not* a question between the "recognised" teachers and their caterers the "Burkers," but a question which—affecting as it does the welfare and security of the whole nation—calls for the immediate interposition and protection of the powers of the legislature. It stands, therefore, between Parliament and the country; and

the legislative measures to be founded upon the recent disclosures, and upon the wants of the public, should be constructed *not* for the protection of local interests and particular institutions, but in such a manner as to embrace and strengthen the whole framework of society.

To return, however, for one moment, to the Teachers. Was there ever a more monstrous proposition than that the lecturers should petition the Home Secretary for an order to close the schools of anatomy? In the first place, the Home Secretary has not power to enforce obedience to such an "order," and in the second place, if these wise petitioners were *sincere* in making the petition, why, in the name of reason, do they not *of their own accord* close their establishments? *Thirdly*, why should they have the consummate folly to petition the executive government for an "*order*" to prevent them from committing an act, which, under the existing laws of the realm, renders them liable to prosecution? As well might they petition the government for an "order" to prevent them from receiving stolen goods—to prevent them from the commission of an act of burglary, or a deed of murder! Fortunate are our students of medicine, in possessing such enlightened instructors. With examples fresh in their recollection, that surgeons have been imprisoned, and fined in heavy penalties, for dissecting dead bodies which had been unlawfully disinterred, our sagacious "recognised" teachers of the schools of anatomy in London have proposed to petition the Privy Council for an "*order*," to the effect that they may be prevented in future from committing certain acts rendering them liable to fine and imprisonment! Nor should it be forgotten, in treating this question, that the dissection of the human body (QUA *dissection*) is not an offence at law. So far from it, the legal authorities frequently issue express orders for the institution of dissection, that the causes of death may be ascertained. Frequent are such instances in coroners' inquisitions, and much more frequent would they be if coroners were enabled to appreciate the *value* of such dissections by applying to them the test of that knowledge which can only be acquired from an attentive study of medical science.

How preposterous, then, is it for the public journals to insist that *dissection* is a process illegal in itself, and that all persons engaged in it render themselves liable to the severe penalties of the law! *The Times* takes this view of the question, although it garnishes its arguments with proposals from two or three persons who know nothing of the matter, and who exist in a state of happy ignorance with regard to the sacrifices which have been made, for many years past, by some hundreds of individuals, for giving up *their own bodies* for dissection, which, of course, implies, that the persons who may have *legal* possession of the bodies subsequent to death, may hand them over to anatomists, in order that the last will and testament of the donors may be executed. If, therefore, the journalists are correct when they contend that "*dissection*" is altogether *il*-legal, it follows, as an obvious corollary, that in these voluntary "sacrifices" there is much more of talk and vanity, than of real utility; for the dead body not having the power to do away with the penalties consequent upon dissection, anatomists would prudently shrink from the responsibility, although tempted by such a rich intellectual repast as the well-moulded limbs, and firmly-set flesh, which compose the substance of such a "sacrifice" as the dead body of the gallant Colonel JONES. Dissection, then, *qua* dissection, is not an illegal pursuit, provided the body, upon which the dissection be performed, be not *il*-legally obtained. This point should be well understood, and ought to be particularly enforced; because the inculcation of an opposite

doctrine leads to confusion, error, and an abuse of law, which circumstances do not justify. When we reflect upon what has recently transpired,—when we recollect that slaughtered human beings have been purchased as readily by the "recognised" anatomists at our schools, as slaughtered cattle would have been purchased by butchers,—who will have the temerity to throw out the opinion that the dissection of human bodies, improperly obtained, ought *not* to be considered an offence under the statute law of the realm? Had the penalties been severer, the *Burks* and *Bishops* might still have been living as honest men, but the *high price* at which they could dispose of the murdered bodies, prompted them to the commission of their crimes; and, unfortunately, the dread of the penalties which the law imposes for the dissection of bodies improperly obtained, was not of such a fearful character as could deter the "recognised" teachers from the purchases, while in the pursuit of their trade. Penalties there are, then, but they are levelled against the stealers of human bodies, and against the dissectors of those human bodies which may be proved to have been stolen. Beyond this, however, the law proceeds not one step; there is no penalty whatever which can be imposed upon the anatomist who dissects a body which may be legally consigned to him; nor can punishment be inflicted upon the consigner of any dead body, if he hold it lawfully, and no trespass be committed.

It were wise in the "recognised" anatomists, therefore, to stem the current of their whining cant, as it is fully in their power to protect the public against a repetition of the horrible *Burk* and *Bishop* murders, by resolutely determining not to allow the dissecting of a single body within the walls of their establishments, unless the dead be consigned to them under circumstances which admit not a single doubt of the legality and propriety of the transfer. The public have a right to expect a strict adherence to such a regulation in the whole of our schools, and if it be departed from, and anatomists be again found holding out a hand of encouragement to the *Burk* and *Bishop* gang, it will be the duty of the public prosecutor to bring such monsters to justice. If a "recognised" teacher be again detected in purchasing, under such circumstances, the dead body of a murdered fellow-creature, we would tell that man that nothing short of his arraignment, in company with his accomplices, at the criminal bar of justice, would satisfy the indignant, the distracted, outraged feelings of the nation.

Without pursuing the subject further on this occasion, we would ask,—What now is to be done? since in discussing this subject or any other, the words *cui bono* should be constantly uppermost in the mind.

First; The public and the profession should at once and entirely reject the testimony and the exertions of the "recognised" teachers, as a body; for their exertions attest not the purity of their motives, neither does their testimony proceed from men unsuspected of crime. If the Council of the College of Surgeons writhe under this condemnation, let those abandoned and profligate monopolists recollect that they caused the medical students of England to be plundered of fees, as contributions to sessional dissections in the "recognised schools," *at a time when subjects were not procurable at any price*; and at the same time were so infamously unjust as to refuse diplomas to those young gentlemen who had acquired a first-rate knowledge of their profession from their studies in foreign countries. "Why?"—will be asked by the uninitiated in these matters. The answer is:—Because the required amount of fees had not been deposited in the pockets of the Council, or in those of their immediate relatives and friends. Who has forgotten the declarations of the late Mr. ABERNETHY to Mr. LYNN, at

the time when both these gentlemen were on the Council of the College of Surgeons? That, "as so many new schools of anatomy were springing up in London and other parts of the country, it was high time they should begin to take care of themselves!" Totally rejecting, therefore, the testimony and exertions of such interested parties, the members of the great body of the profession generally, should attempt, *Secondly*, To use whatever influence they may possess with the members of the legislature and with the community, to disabuse the public mind with respect to the supposed advantage arising from subjecting the bodies of *murderers* to dissection. *Thirdly*, they should insist upon the obvious, the incontrovertible fact, that there can be no security for the public against the knives of such monsters as *Burk* and *Bishop*, while the encouragement to the commission of their crimes is held out to them by the scarcely less atrocious monsters who unhesitatingly purchase the dead bodies of human beings from the blackest felons that ever added to the catalogue of human crimes. In a word, we call upon medical men in every part of the kingdom to enforce the propriety of repealing the statute which consigns to dissection the bodies of murderers; and, finally, to employ the powers of their understanding with a view to convince the public that if the *buying* and *selling* of the dead bodies of human beings be not rendered offences punishable with the severest penalties of the law, society can never be secure against the diabolical operations of the *Burks* and *Bishops* of the age. These points once established, the legislature, at no distant period, may proceed to the discussion of an anatomy bill, in the firm hope that a measure may be produced of a nature to promote most effectually and expeditiously the great cause of medical science without offending the understandings of the learned man, and without violating the feelings of the prejudiced man. But until the obstacles here pointed out are removed, we cannot proceed a single step in safety.

THE CHOLERA
IN THE NORTH OF ENGLAND.

At the moment of our going to press we have received a letter from a physician at Sunderland, on the subject of the disease prevailing in that town, under the name of "The Cholera,"—the *Blue Cholera of India*, as we have for some time designated the desolating pestilence which has commenced its scourges in the North of England. We have only time to notify to our readers that this gentleman will, so long as the progress of the disease may render communications from that quarter of public and professional importance, correspond with us on the subject of it, and that his communications will, from week to week, be made public in the pages of The Lancet. Without farther observation, we briefly enumerate, that in full accordance with the opinions entertained by all the medical men in Sunderland with whom he has as yet had the opportunity of conferring, our correspondent expresses his firm conviction that the disease in that town is, in all its essential symptoms, the *Epidemic cholera of India*; and secondly, that medical aid is applied in Sunderland, under circumstances in every respect disadvantageous to the recovery of those who are attacked.

To the Editor of The Lancet.

Sir,—Having proceeded to Sunderland for the purpose of making myself practically acquainted with the celebrated disease therein prevailing, I have lost no time since my arrival, on Sunday night, in endeavouring to obtain conviction on some points, and evidence on others, on which either controversy had been excited, or further instruction was desired.

The question of the identity (supposed

by some, and disputed by others) between the malady named *Cholera*, indigenous in this as well as all other European countries, and that which has recently so riveted public attention, was one demanding primary solicitude. The effect of treatment in the disease, as witnessed in Sunderland, next deserved scrutiny. Lastly, the local progress of the malady, and the inferences thence to be deduced as to the probable extent of its future ravages, had become matter for much anxious inquiry. On each of these points I proceed to offer you a few reflections, partly suggested by my own observations, principally by the information I have derived from the gifted men with whom it has been my good fortune to associate since my arrival in Sunderland.

The first proposition, namely, that of identity between the disease now raging in Sunderland and that to which we have been long accustomed, is one of a mixed degree of importance. It is of deep and fearful interest as regards the therapeutics of the disease,—and on this point little weight has been laid by those who have most loudly agitated the question. It is of minor and secondary consequence as regards the controversy respecting the mode of propagation of the malady, although it is in consequence of its supposed bearing on this department of the subject, that discussion as to identity or non-identity has arisen.

Are the diseases, then, the same, or are they different? I shall derive my answer from the history of the Sunderland malady alone, contrasted with that of the disease of the same name we have all long since witnessed, and with which every practical man is thoroughly conversant. I derive my answer from the triple source of,—The opinions of the medical men who have practised in this town for many years, and who have witnessed the present melancholy affliction,—Of the strangers who have flocked from Dublin, Edinburgh, London, and the other provincial cities, and from foreign climates,—And, lastly, from my own observations, founded on a moderately extensive acquaintance with our indigenous cholera, and on the examination of the appalling cases I have seen since my arrival.

I am, then, fully authorised to declare, that all the practitioners, civil and military, official and volunteer, whom I have met in Sunderland since my arrival, have, without a solitary exception, declared to me their *opinions*, that the diseases were totally different from each other,—that their symptoms were different, their pathology different, their proximate causes different, and their remote causes equally dissimilar. The numerical amount of opinion thus obtained, and the eminent quarters whence it emanates, are sufficient to ensure it respectful consideration. I speak, you will mark, but of those I have myself met, and these comprise—a member of the Dublin deputation, two of the Edinburgh volunteer practitioners, several of the London visitors, and a considerable number of the most distinguished practitioners of this town, and those who have most opportunities of learning the nature of the present malady, and who have had the greatest experience in the indigenous disease of other years.

You will, perhaps, ask my own opinion on the question. I will give it frankly, and without the awkward affectation of a diffidence, which I honestly think would be here altogether misplaced. I agree then fully with the views of those I have already quoted, feeling perfectly convinced, as far as my own observation has extended, that the cholera which I have over and over again witnessed in the kingdom of Great Britain, which I have studied in the clinical wards of the Edinburgh University, under the guidance and demonstration of the respected men who teach clinical medicine in that institution, and of which, finally, personal experience enables me to speak,—is a disease entirely different in its ESSENTIAL *symptoms* from that which I have yesterday and to-day witnessed in this town. I speak not of the *pathology*—for that I have had no opportunity of examining,—I speak but of the symptoms, and you will remember, that it is on these the champions of identity assume their only position.

Accompanied by Mr. Kennedy, the distinguished writer of the excellent book which has so deservedly elicited your praises, I this day went to visit a woman named *Henry*, who had been attacked with the disease in a severe form about twenty-four hours previously. We tracked our way through a dirty lane near the barracks, ascended a tottering *escalier*, and found ourselves in a small, though not uncomfortable, apartment. On the bed lay the expiring woman, apparently aged at least seventy years, and presenting a shape and attitude of death, which, although accustomed as I am to its most variegated shapes, I never saw paralleled in terror. But I close the curtain on this patient, and turn to a more instructive object. On the floor, before the fireplace, extended on a palliasse, covered with a solitary blanket, and surrounded by a group of female friends, lay a girl of slender make and juvenile height,

but with the face of a superannuated hag. She uttered no moan, gave expression of no pain, but she languidly flung herself from side to side, and from the supine to the prone position. The colour of her countenance was that of lead—a silver blue, ghastly tint; her eyes were sunk deep into the sockets, as though they had been driven in an inch behind their natural position; her mouth was squared; her features flattened; her eyelids black; her fingers shrunk, bent, and inky in their hue. All pulse was gone at the wrist, and a tenacious sweat moistened her bosom. In short, Sir, that face and form I never can forget, were I to live beyond the period of man's natural age. She had vomited some whitish watery matter at few and distant intervals, and had had *a few insignificant dejections* of the same kind.

I appeal to Mr. Kell, the surgeon of the 82nd, to Dr. Reid Clanny, to Mr. Kennedy to Dr. Morreis, and to numerous others who have seen this case, to say whether I have not understated, rather than exaggerated, its features. And, secondly, I appeal to any practitioner in existence, whose mind is not warped by prejudice, and the expression of whose opinions is not restricted by former declarations, whether he has ever seen a case of *our* cholera corresponding to that description. Would to God I could bring the sceptics here, and show them the girl Henry! And if they can confound the exhaustion consequent on the essential vomiting and purging of English cholera, with the sudden, deadly, overwhelming, collapse, the *living death*—to use an apparent paradox—of the unhappy being who will probably have perished before my letter closes—if, I repeat, they can confound these symptoms (and I speak but of symptoms, for it is on them they exclusively dwell), I shall, to use the words of an ingenious writer in your Journal on the other side of this question—"For ever after follow the philosophy of the man who doubted his own existence."

When to this marked diversity of symptoms we add the pathological differences, and the dissimilarity of the *remote* causes, of both diseases, as far as we are entitled to reason on them analogically, and from a knowledge of their effects, I cannot avoid expressing my firm conviction that the disease of Sunderland, and the indigenous cholera of England, are as dissimilar as poisoning by arsenic and poisoning by hydrocyanic acid; for to the one I would liken the symptoms of indigenous cholera, and to the other I would compare the *essential* characters of the present malady in its worst, though simplest, form, rather than to any other affections which nosology comprehends.

An interesting question here naturally arises:—What then is the nature of the numerous cases to which in the early reports from Sunderland the name of "common" cholera was given? The answer is simple. They were the *same* disease, occurring in different individuals, and produced by a poison in a different state of concentration. Largely diluted doses of nitric acid cause little or no intestinal irritation, but a diuretic effect is produced. Concentrate the dose of the acid, and you destroy the abdominal organs, and no diuresis supervenes. Thus with the poison of this disease;—concentrate, and it kills;—dilute, and it produces a purgative effect. Why, or *how*, I do not know; but if I am told that the same reasoning will apply to severe and mitigated cases of *our* common cholera, I reply, that while vomiting and purging are essential, ever-present, symptoms, in that malady, and while exhaustion is the natural consequence of such excessive action in the *present* disease, vomiting and purging are almost or altogether absent in the worst of cases, and consequently the debility cannot be their effect.

I may, perhaps, again return to the "identity" of the disease; but the post hour approaches, and I am anxious to say a few words on the other points mentioned in my letter, viz. The treatment, and the local progress, of the Sunderland disease.

The first may be very briefly alluded to. Owing to the horrid want of the least approach to a system of medical organization for the affording of *home* attendance, and owing to the insensate prejudices of the lower orders against the cholera hospital, treatment is scarcely ever applied, *except by accident*, until hours have elapsed after the first seisure. The readers of THE LANCET may therefore readily imagine, that almost every bad case is fatal. Again; the cases that *do* fall under early notice, become such objects of attention and solicitude to all the practitioners, amateur and official, native and exotic, that a Chinese mandarin, who has to swallow simultaneously the separate medicines ordered by each of the scores of his physicians, was never more copiously or heterogeneously drugged than are some of these unhappy creatures. This I speak, not from personal knowledge, but from information, authentic and firmly to be depended on. On the subject of treatment, then, I am quite prepared to assert, that no system can be effectually tried here, and that no practitioner need repair to Sunderland for any further knowledge of the disease than the symptoms of the cases will afford.

I now arrive at the progress of the malady. I send you the daily report up to this moment, and by the time you have received

this letter you will perhaps be aware that several new cases and deaths have occurred at Newcastle, and that three cases have taken place at North Shields. Two cases have occurred in a colliery east of Sunderland; several at Painshaw, at Houghton-le-Spring, at Chester-le-Street, and other villages. I am endeavouring to procure a copy of the recent survey of Sunderland and its vicinity, and hope by a diminished drawing to afford you and your readers more precise information respecting the *geographical* mode of the spreading of the disease.

In conclusion, let me intreat you, as you love your fellow-creatures, to relax not in your efforts to promote the amelioration of the condition of the poor, and above all the thinning of their habitations wherever practicable. *Whole dens* in Sunderland have been depopulated. If this be not looked to in time, I shudder to contemplate the consequences when the heat of spring and summer come to assist the ravages of the cholera in such places as St. Giles's and Wapping.

If the Government were to despatch a deputation of their own body to witness the disease in Sunderland, national funds would soon be applied to this first of all national objects,—the protection of the people from a devastating scourge.

I am, Sir, your obedient servant,
W. B. O'S.

Sunderland, Tuesday, five P.M.

THE CHOLERA AT SUNDERLAND.

SUMMARY of *Daily Reports* made since the 6th of December up to the 13th of December.

On the 6th of December there remained under treatment thirty-three cases.

	New Cases.	Deaths.	Recoveries.
Dec. 7th	7	2	1
8th	19	7	1
9th	10	9	3
10th	17	4	23
11th	10	5	9
12th	9	6	9
13th	8	3	10

There have been, from the commencement of the disease on the 26th of October, Cases, 449—Deaths, 155—Recoveries, 273.

Remaining under treatment, 21.

Letters from Newcastle received in town on the 10th of December, announced that the cholera had reached that place on the 7th instant, immediately after which official daily reports were published, of which the following is a summary to as late a date as we can at present give it.

AT NEWCASTLE.

	Cases.	Died.	Recovered.
Dec. 7th and 8th	7	1	1
9th	5	2	0
10th	2	2	0
11th	2	1	0
12th	0	1	0
13th	16	3	1
	32	10	2

Remaining under treatment 20 cases.

On the 13th it was announced that the cholera had also made its appearance at North Shields, and daily reports have since been published from that place also. They are as follows:—

AT NORTH SHIELDS.

	Cases	Died	Recov.
Dec. 11th	2	1	0
12th	0	0	0
13th	1	0	0
	3	1	0

All these reports are dated "Central Board of Health, Council Office, Whitehall." At Newcastle we learn that the cases there are almost all of them confined to the very humblest and dirtiest parts of the town.

THE law enacts that the bodies of all executed murderers shall be handed over to the College of Surgeons, on the condition that they shall be anatomized within five hundred yards of the prison. In compliance with this enactment, the bodies of the miscreants, *Bishop* and *Williams*, were carried, on the morning of their execution, to a house in Hosier Lane, and, tripodical incisions having been made on the chest and abdomen, the College Council gave that of *Williams* to Mr. GUTHRIE, that of *Bishop* to Mr. PARTRIDGE, of the King's College.

On the day following, the public were permitted unrestrictedly to gratify their curiosity by a view of the corpses as they lay, one at the King's College, the other at the Theatre of Anatomy, Little Windmill Street. At the latter place, however, after the first day, a scene occurred to which se-

veral correspondents are desirous to direct our animadversion. "Several young gentlemen," observes one of them, "arming themselves with constables' staves and broken chair-legs, took their station at the door with the patriotic object of assisting the police constables in 'keeping the peace,' whilst curiosity was taxed by a money-taker stationed within side. The spectators in the dissecting room were occasionally gratified with a sparring match between two gentlemen amateurs (pupils), and those outside had their time beguiled by what was, no doubt, considered a capital bit of fun,—namely, the hauling up of a can of beer, over the heads of the crowd, into the dissecting room." Our correspondent has attached some remarks on the unseemly behaviour of these students, which it is unnecessary to insert, as the circumstances furnish their own comment.

A Practical Treatise on Injuries of the Head. Dublin: Fannin and Co. 1831. Small 8vo. pp. 121.

One of the ancients has said, that thick heads prevailed in Beotia.* We know that broken heads are equally epidemic "in the Land of Saints." During the olden time, the encounters of the orange and liberty "boys" upon bloody bridge, and, recently, the "humours of Donnybrook," have given rise to as many bruised scalps and fractured skulls as some modern engagements. We do not wonder, then, to find "a *practical* treatise on injuries of the head" proceed from the pen of a Dublin surgeon, and might even conjecture, that in some instances he had been at once the cause and the cure of the disease.

The little volume before us is an extremely creditable production. It consists in a well-arranged digest of the works of the most able writers on the subject. The opinions of Pott, Dease, Desault, Abernethy, Cooper, Colles, &c., are incorporated, with original observations, derived from the ample opportunities which the Dublin hospitals afford of studying the nature of wounds of the head in all their varieties; and in justice to the author we must say, he appears not to have neglected the advantages possessed by him. There is here no slavish adherence to one set of men, or to one set of opinions; no perpetual appeal to a single authority, as has rather been the fashion for some time on this side the water; but after a cursory, though careful, glance at the advice given by the most eminent surgeons on each species of injury, the author proceeds to lay before the student, in a clear and simple manner, the rules which are to govern his conduct, together with the reasons which ought to influence him in preferring one mode of practice to another. At the end of each chapter we find a collection of aphorisms embracing the substance of the doctrines contained in it. From these we will select those on fracture as a specimen of the work.

"A simple fracture or fissure of the skull, with or without a wound of the scalp, is an accident of no great importance, and requires no attention from the surgeon, beyond the usual treatment for an injury of the head unaccompanied by fracture, except, perhaps, that the antiphlogistic regimen and evacuations are more decidedly necessary.

"The danger often attending simple fractures of the skull, is to be attributed to some injury which other parts, particularly the brain, have received at the same time.

"Fractures of the base of the skull are attended with more danger than those of other parts, because the violence necessary to produce them must prove highly injurious to the brain.

"Never make an incision into the scalp, for the purpose of ascertaining the existence of a fracture, even if you should have reason to suspect depression of the bone. Such practice is wholly unnecessary, and may be productive of bad consequences.

"No calculation of the bad effects which are likely to follow depressed fractures of the skull can be made from the extent of the fracture, or the depth to which the broken piece has been sunk.

"The treatment of depressed, like that of simple fractures, consists merely in a rigid attention to those measures which are best calculated to prevent inflammation of the parts within the cranium.

The trepan should never be used in depressed fractures without a wound of the integuments, unless necessary to remove *existing* symptoms of compression or inflammation of the brain. If these be present, we should trepan, even though no fracture existed.

* "Bœotium in crasso," &c.—Juv.

"The complication of a wound of the scalp with a depressed fracture, is considered by Sir Astley Cooper as a reason why the trephine should be immediately applied as a preventive of future bad consequences; but perhaps the maxim, *never to trepan, till compelled to do so by urgent symptoms*, is the best general rule that can be adopted.

"In comminuted fractures always remove the loose portions of bone, as their remaining in the wound must produce inflammation.

"If a small piece of bone be detached, and completely buried in the substance of the brain, perhaps it is better to wait a few days till the brain is hardened around it, than to attempt its immediate extraction.

"Gun-shot fractures present so great a variety of appearances, that no general rule of practice, applicable to each individual case, can be laid down."

Every surgeon is aware of the tendency which punctured wounds of the scalp have to inflame and produce troublesome symptoms, while the proximity of the brain and its membranes demands the utmost vigilance, lest this important organ should be attacked, and involve the life of the patient in imminent hazard. The symptoms of this affection differ from those produced by true erysipelas of the scalp. We have not the same degree of tumefaction, nor does it pit on pressure, but the constitutional symptoms are extremely violent; "Acute pain in the head, hot skin, parched tongue, excessive thirst, constipated bowels, high-coloured urine, and very frequently delirium, with all the other symptoms of high inflammatory fever, are the almost constant attendants on punctured wounds, penetrating the aponeurosis of the occipito-frontalis muscle." The surgeon, misled by theory, and intent only on combating symptoms, will sometimes content himself with the application of fomentations, and a few leeches to the scalp or the abstraction of blood from the arm; but these means are of no avail, unless relief be given by a free incision to the bone, through the tendon of the muscle. Indeed, the work before us goes so far as to say, that "perhaps the best practice would be, in all cases, even before the occurrence of inflammation, to enlarge the wound by a simple incision, and thus leave a free space for the tumefaction of the integuments and aponeurosis, which almost always succeeds." From this advice, however, we must dissent. If punctured wounds of the scalp were *always* attended with tension and violent symptoms, the reasoning might be correct, but to make an incision of two or three inches along the scalp, merely because a wound *may* inflame, and *then* require such treatment, is, in our judgment, carrying *quarantine* to a vexatious degree. Prevention may be better than cure, but a wise man will avoid inflicting on himself a positive injury for the chance of escaping a contingent evil.

Elements of Anatomy, General, Special, and Comparative, originally published in the Encyclopedia Britannica, and now reprinted in a separate Form. By DAVID CRAIGIE, M.D. With 14 plates. Adam Black: Edinburgh.

DR. CRAIGIE is already favourably known to the profession as the author of a work on general anatomy, and he here presents us with an outline of comparative, descriptive, and general anatomy, written in the manner and style best suited for the publication in which it originally appeared. Without branching into unnecessary details, the leading points of each division are placed before the reader in a clear and concise (though sufficiently comprehensive) manner, the whole forming a volume which may be perused with pleasure and advantage, both by the non-professional man of science, and the practical anatomist. We bestow this praise on the production with the greater pleasure, because many of the elementary works which the fecundity of modern authors compels us to read, are either little better than mere catalogues of the science, or (to borrow a metaphor from midwifery) *breech-presentations*.

The portion devoted to comparative anatomy is highly interesting, and although from the space assigned to the article, it was impossible to treat the subject fully, Dr. Craigie has contrived, by the introduction of whatever was likely to throw light on human anatomy, and by a careful attention to those points which most require illustration, to present us with a vast quantity of useful and entertaining know-

ledge. The volume is embellished by several well-executed engravings.

It is astonishing how great a number of our really scientific men are entirely ignorant of the structure and internal economy of the animal kingdom. Other sciences are cultivated with zeal, and pursued with diligence by all classes of the learned; but the interesting problems of life, motion, and being, are resolvable by few or none of those who do not study medicine as a profession. The present production of Dr. Craigie is suited especially to general readers, and we venture to predict that no one will rise from its perusal without a strong inclination to gain further insight into the subject.

Short and Plain Rules for the Prevention and Cure of the Cholera Morbus, intended for the Unprofessional Reader. By GIDEON MANTELL, F.R.S. London: Relfe and Unwin. 8vo. p. 13.

IN the preface to this little tract, the author observes that—

"The following hints are published in the hope of mitigating in some measure the fears regarding the cholera morbus, which now so generally prevails; of calling the attention of the rich to the condition of the lower classes, among whom if the disease should occur, it is impossible the former should escape; of impressing on the minds of the poor the protection which temperance, cleanliness, and confidence, afford; and for the purpose of placing within the reach of all, a simple and effectual mode of treatment for the *earliest* stage of the disease and *until* medical aid can be procured. To accomplish these objects, and render these suggestions intelligible to all, the most plain and familiar style has been adopted."

Without pretending to criticise a little tract of this description, consisting of only thirteen pages, we may remark that Mr. MANTELL appears to have written with the best possible intentions, and has collected his facts so judiciously, and expressed himself so clearly, that his arguments are calculated to produce the best effects upon the minds of unprofessional readers, to whom his admonitions are exclusively addressed.

WESTMINSTER MEDICAL SOCIETY.

Saturday, December 10th.

DR. STEWART, in the Chair.

THE ANATOMY QUESTION.

THIS evening, before recurring to the adjourned debate, some little discussion took place respecting the petition proposed by Dr. SOMERVILLE at the last meeting, to be presented to Parliament. After a short conversation on the propriety of merely petitioning for an alteration of the present anatomy laws, or accompanying that prayer with suggestions as to the new legislative regulations, it was finally determined that on the ensuing Wednesday, at eight o'clock in the evening, a Special General Meeting of the Society should be holden, in order that the whole of the members might have an opportunity of taking the subject into their consideration.

THE CHOLERA,

ITS NATURE AND TREATMENT.

Mr. SEARLE read a paper on the *Pathology of Cholera Morbus*, of which, from the length of the room, we could scarcely hear two consecutive sentences. The remarks, however, which it elicited, will most probably afford our readers a knowledge of all the more interesting points which it comprised.

Dr. M'CLEOD thought he must labour under some mistake, and if so would wish to be set right, before proceeding further. From a passage in the commencement of Mr. Searle's paper it appeared that Mr. Searle was desirous of maintaining the identity between the English and Indian cholera, although he afterwards spoke of them as proceeding from different causes, and having a specific difference in themselves.

Mr. SEARLE, in reply, said that his opinion was that the two maladies were "intrinsically, but not identically, the same," and instanced, in illustration of his meaning, the similarity of effects produced by medicines totally different.

Dr. M'CLEOD would point to the "intrinsical" distinction between the English and Indian cholera; in the former an omnipresent accompaniment was the bilious vomiting and purging, whilst the *absence* of bile was the invariable characteristic of the latter;—in the one an increased activity of the secretion of the liver; in the other the ejected fluids were mere exudations. But Mr. Searle went to general points of resemblance, and referred to the effects of opium and belladonna. They might be both narcotics, but the practitioner with his mind's eye discerned the real variation which re-

gulated the difference in the doses. Besides, if identity of diseases were to be judged of from such a standard, we must confound violent hysteric fits with epilepsy, tetanus with hydrophobia.

Dr. JOHNSON wished to advert to one point, insisted on by the last speaker, namely, the distinction to be learnt from the absence or presence of bile. He denied the correctness of the inference. First were discharged the contents of the stomach, and then came the bile, which was a favourable symptom. Indeed, after continual evacuations, upwards and downwards, what was to be expected but bile? Was not the same observed in the administration of emetics? The best observations on this point were to be found in an article written by Bateman, in Rees' Encyclopædia, where the fact was remarked on, that bile appeared after a few hours. With regard to the English and Indian cholera, his own opinion was that in the latter there was an additional cause of the disease beyond the exciting cause of common cholera, and in the disorder at present prevailing there must be some inscrutable cause, rendering it so epidemic, not hitherto existing.

Dr. GREGORY would not hesitate to say, that in more than one case of English cholera, bile appeared at the very onset of the disease. Why should it not? Did Dr. Johnson mean to say, that the bile could not enter the stomach from the duodenum in such circumstances?

Dr. JOHNSON. I did not speak of what was possible, but of what is the case.

Dr. GREGORY repeated, that the bile existed in the stomach with the act of vomiting, when the vomiting would consist of bile mixed with the other contents of the stomach. Dr. Gregory concluded by referring to the observations of the preceding evening, when the proposition had been made of treating cholera by injection of oxygenated salts into the jugular vein, and he wished to ask the gentleman from whom the proposition came, whether he was prepared to recommend its trial in practice. Being informed, however, by the Chairman that Dr. O. Shaughnessy was absent, he sat down.

Dr. M'CLEOD had been told of the intensity of attack in cases of English cholera. He had seen but two patients die of it, but one of them, who died after thirty-six hours vomiting, purging, and cramps, appeared exhausted like a person who had been overdosed with drastic purgatives; the lungs did not seem to fail in action, and there was not that blueness resulting from the impeded arterialisation of blood.

Dr. GRANVILLE had listened for seven or eight evenings to this long discussion of theoretical points, and he thought that a few really practical observations would now be highly prized. He was induced to rise, from having heard early in the evening the announcement by Dr. Sigmond of the presence of Dr. Barry among them, and with a view, therefore, of drawing from that distinguished gentleman some of the practical results of his great experience, he begged to ask his opinion respecting the identity between the disease of Russia and Sunderland and the common cholera.

Dr. BARRY, upon rising to speak, was received with marks of great applause. He said that, feeling at all times great pride and honour in being a member of the Society, he had regretted that his intense occupation and continual correspondence with the different authorities had prevented him, when abroad, from forwarding information to the Society. He was sorry that Dr. Granville had raised their expectations respecting what they were to hear from him, but such as he had to communicate should be told with pleasure. In answering the immediate question put to him by Dr. Granville, he would premise that, as he had never been out of Europe, his opinions must be considered as relating to the disease which had been presented to him on the Continent. Now he must confess, that on going to Russia after reading the Indian reports, his impression was, that the essential characteristics were ungovernable discharges up and down, and a state of collapse, which destroyed the patient by absolute exhaustion. This he found not only was not the case, but that, on the contrary, the want of discharges was a general occurrence. Neither Celsus nor Sydenham, who had so often been cited, could have seen *this* disease, or would they have forgotten to mention in their diagnosis the remarkable blueness of the surface of the body, the cold breath, the cold tongue, the extraordinary look of the eyes sunk in sockets, which appeared *dug out* for their reception, the excessive corrugation of the skin, and the tendons on the hands and feet as prominent as if the whole intervening substance had been dissected out? But the best way of enabling the Society to form an estimate respecting the disputed identity, would be to mention a case. In Sunderland he had seen a fine young man, about twenty-five years of age, who supported by his exertions his mother, wife, and a young family. This poor young man, when proceeding to his work at eight in the morning, was suddenly seized by the disease, though previously in excellent health; and when seen by him (Dr. Barry) at half past eight, he was all over as blue as the iris of his eye,

his head was hanging back over the bed, and the diaphragm seemed to labour against the most intolerable oppression. At nine in the evening he was a victim to the mortality of the plague. Sydenham had remarked that the cholera described by him prevailed in the month of August, but this disease had despised the heat of India, and the cold of the northernmost climates, through every season. The arguments founded on the appearance and non-appearance of the bile were exceedingly fallacious, and of course, therefore, no guide in the diagnosis. There was a peculiar anatomical point connected with the *post-mortem* examination of patients who had died of the cholera. He had never opened one of such bodies, without finding the gall-bladder exceedingly distended, whilst the urinary bladder seemed lost, and, when found, presented the appearance of a shrivelled fig. Another peculiar circumstance was to be remarked in the state of the spinal chord. In two-thirds of the bodies he had opened in Russia, the vessels covering it had been in a turgid and phlogosed condition, and he had seen the chord in a state of pulp just at the lower dorsal vertebra. It was on that account that Dr. Laing in Cronstadt had adopted his plan of treatment. Having observed the *ramollissement* in the spinal chord of a merchant and a boatman, together with seminal emission, Dr. Laing had employed the actual cautery near the part of the spine, and out of fourteen, in whom the plan was adopted, had saved no less than twelve; but the misguided people crying out that they were poisoned, threatened the physician with violence if he "roasted" any more, although those who had submitted to the remedy begged to be "burnt again" should there be a recurrence of the evil. So convinced was he (Dr. Barry) of the efficacy of this method, that he had laid his testimony before the central board of health, recommending its adoption should the cholera spread in this country. He related another case—that of a plump girl of sixteen. When he saw her in bed she looked blue—or of that hue produced in persons by the nitrate of silver, or as if a black veil were drawn over the body. The face, which had been full, was shrunk to a mummy; the lips, uncommonly thin, were separated, and showed the teeth, giving the appearance of an agonising grin, precisely as if the hand of death were within her, tearing out the vital organs. There was no vomiting. She died about two hours after. Was *this* like English cholera? He himself had suffered common cholera often, and he well knew the "bucket-fulls" that were discharged from one. (*Laughter.*) Dr. Barry adverted to the urgency of the symptoms in the cold stage, the paralysis of the heart, and the change in the circulation—the serous portion of the blood being thrown on the surface of the bowels, and the black particles being left in the veins, which accounted for the dark, depressed, flat lines, presented along their course. He concluded by saying that the cholera at Sunderland bore much analogy to the cold stage of a pestilential destructive fever.

Dr. Copeland recalled attention to the statements which he had from time to time made before the Society, and was glad to be supported by the testimony of such a man as Dr. Barry. He had contended that English cholera was altogether different from that of the Continent or even of warm climates. It had also been said that the present pestilence was only common cholera in an epidemic form, but he asked when there was an instance of an epidemic of fourteen years' duration. He had contended also that, if so, why was it confined to Sunderland, why did it not spread to Shields, Newcastle, and the surrounding neighbourhood? Therefore it was to be inferred that the principle of its propagation was not merely in its epidemic nature. Again, on referring to the consecutive symptoms of common cholera, where were the malignant typhoid symptoms, or any other manifestations of reaction? Where the peculiar post-mortem appearances—the mucous surface of the intestines covered with an albuminous fluid so copious as to plug up the canal?

Dr. Webster (we believe) argued that there appeared to be three varieties of one leading form of the disease, which leading form he considered to agree in character with the intermittents arising from malaria. Of the different grades, the appearance of bile he supposed to characterise the milder, and the more severe stages resembled the condition of the intense forms of fever.

Mr. Searle was of opinion that the three forms of the disease at Sunderland, the diarrhœa, common cholera, and pestilential cholera, were all branches of the same trunk.

Dr. Barry being questioned on some particulars, apologised for declining at that time to offer any further opinions, as he was troubled with a bad cough; another evening he should be happy to communicate any further information.

Mr. Searle thought that the peculiar state of the spinal canal and chord could not be the product of the disease, which was too short in its operation to produce these organic changes. He was convinced, therefore, that the recovery of the twelve patients of Dr. Laing was not to be attributed to the treatment by the actual cautery.

A Gentleman related a case in a low voice, with the intention, as we understood, of showing that *the* cholera was not singular in its striking effects. The symptoms of

the case were cold clammy perspiration, features contracted, eyes sunk, with dark areolæ round them, restlessness, nails bluish-white, skin dingy, matter discharged from bowels of a watery consistence, light-clay-coloured, and copious in quantity. The patient was a laundress, aged 56, and died in twenty hours.

The discussion was then adjourned.

SPECIAL GENERAL MEETING.

Wednesday, Dec. 14th.

Dr. GRANVILLE, in the Chair.

THE ANATOMY QUESTION,

Pursuant to the resolution of Saturday last, was brought on this evening.

Dr. STEWART explained the objects for which the meeting was convened. To consider, 1st. Whether the society should petition Parliament on the subject specified in Dr. Somerville's resolution; and if the petition should be a mere repetition of the former petitions. 2d. Whether, in case these should be rejected, the meeting should proceed to discuss the question; and 3rd, Whether remedies for the difficulties should be proposed.

Dr. WEBSTER was of opinion, that in consequence of a specific resolution empowering the committee to prepare a petition, having been passed last Saturday, the deliberation of the present meeting should be on the second question. He thought that the two former petitions, with a few verbal alterations, would be sufficient.

Mr. KING explained the proceedings of the committee as regarded the petition.

Mr. HUNT commenced some observations on the necessity of an address to the legislature at the present epoch, suggesting remedies, when he was interrupted by

THE CHAIRMAN, who observed that Mr. Hunt's remarks applied to the third question before the first had been discussed.

Mr. G. BURNETT made some remarks on the irregularity of the proceedings which had attended the meeting of the committee, and the consequent meeting of the society, and more particularly alluded to the irregular manner in which Dr. Somerville had introduced his proposition.

After Dr. GILCHRIST, Mr. BABINGTON and Mr. CHINNOCK had remarked upon the inconsistency of Dr. SOMERVILLE'S anxiety for the subject then under consideration, and his absence from the debate, a motion for adjournment was made by Mr. KING, and carried.

LONDON PHRENOLOGICAL SOCIETY.

December 12th, 1831.

Dr. ELLIOTSON, President.

Dr. CRANE, and Edmund Shepherd Symes, Esq., were elected ordinary members: Dr. Wright, a corresponding member: George Combe, Esq., was proposed as an ordinary member: George Bennett, Esq., late from the Pacific Ocean, as a corresponding member.

Mr. BARLOWE read a paper, communicated by Dr. J. P. Browne, intended to elucidate those cases in which, during disease or the effects of accidents, the knowledge of a language long forgotten by the patient has returned. The individual case which gave rise to the observations was that of a Welshman, who received a severe injury in the head and recovered in St. Thomas's Hospital. But when he recovered and became aware of everything around him, he spoke in a language which no one understood, till by chance a Welsh milk woman, passing through the ward, heard him talk, and at once declared he was speaking Welsh. It appeared, that he had not been in Wales for thirty years, and in that time he had forgotten his native tongue, but acquired the English; and the effect of the blow in the head was to restore his Welsh to him, but to deprive him of all knowledge of English which he had of course learnt after leaving Wales. A case like this, and there are hundreds on record, confirms the phrenological doctrine, that memory is not a distinct faculty but an attribute of others; for this man's memory was good in every particular except language. It also confirms the phrenological doctrine of the faculty, relating to language being confined to a certain part only of the brain, as the man's faculties at large were unimpaired.

Mr. DEVILLE stated, that he had now sixty-eight casts of various individuals, taken in each instance more than once, and in some several times, at intervals of few or many years, to ascertain whether the form and size of the head varied according as a faculty or propensity was encouraged, or neglected, or restrained; and he stated that the alterations were decided and correspondent.

HUNTERIAN MEDICAL SOCIETY OF EDINBURGH.

Wednesday, November 23.

Mr. G. HAMILTON in the Chair.

Dr. AITKEN read a communication on the *Food of the Faroe Islanders*, and exhibited part of the carcase of a sheep reduced to

little more than a mass of dry fibre. It was found to possess the negative recommendation of having scarcely any taste. Some conversation ensued as to the possible connexion between the cutaneous diseases prevalent in those islands, and the peculiar food of the inhabitants.

An essay on *Pulmonary Tubercles* was then submitted to the Society by Mr. N. Rogers, senior President. The introduction adverted to the great improvements effected in medicine by pathological researches; and the still greater results to be anticipated from their prosecution. The essayist then traced the progress of tubercles through their different stages, following them into the anomalous varieties which they occasionally present, and examining with minuteness the conflicting opinions of eminent pathologists, particularly of the French school. He then passed on to the consideration of various collateral subjects, especially the interesting questions relative to the inflammatory or non-inflammatory origin of tubercles; and the curability of phthisis; concluding with the following remarks on our limited knowledge of the sciences,—medicine among the rest:—

"The whole course of our investigations must have contributed to convince us on how limited a number of questions a decided opinion is admissible, and there are few subjects we could have taken up that would not have led us to the same conclusion. In what direction soever we turn we meet with doubts unresolved, difficulties unconquered, intricacies unexplored. Points which we had considered clearly established will often fail to stand the test in closer examination; and ground we had esteemed the most solid and secure, will sometimes tremble beneath a determined step. Such a review as we have taken, is calculated to leave on the mind a most salutary impression; for where ignorance is confident and arrogance bold, it is the part of true philosophy to doubt and to deliberate. But this review will have failed in a most important part of its intended effect, if along with this sense of deficiency, it do not produce, at the same time, strenuous anxiety to supply the want. The field is wide; the path is open; the pursuit is noble; and rich and varied are the results that will reward the diligent investigator. Far as we think ourselves to have advanced, we may yet be only at the commencement. The wisest philosophers of the present day are those who confess their ignorance; for our present knowledge is calculated rather to make us ashamed of our deficiencies, than vain of our acquirements. We have herd much of the "*decline* of science in *England*." I would rather speak of its *limited advancement everywhere*. Endeavour, in any direction, to trace effects to their causes, and how soon is your progress arrested! With the great final cause of all the phenomena around us, we are well acquainted; but the proximate cause generally eludes our grasp. We have busied ourselves with the surface, but have failed to penetrate the interior. We have attentively examined the operations of nature's stupendous machinery, but of its intimate structure we know little. In fine, to adopt the language of the most enlightened but yet most modest of philosophers,—'We have been picking up pebbles on the sea-shore, while the great ocean of truth lies before us unexplored!'"

THIRTEEN CYSTIC OXIDE CALCULI

DISCHARGED FROM AN OPENING BETWEEN THE UMBILICUS AND PUBIS.

By Hugh Neill, *Esq., Liverpool.*

I was enumerating, when upon a visit to my father a few weeks ago, some of the old cases which I recollected to have seen when his pupil in the Coleraine dispensary, about half a dozen years since; and I mentioned that of Sally Kane, upon which I received from him the following statement:

"Sally Kane, a blind woman, about 50 years of age, a patient in the Coleraine dispensary, complained for more than six months of pain in the back, slightly shooting at times towards the umbilicus. The pain became more violent, when swelling and redness induced her to apply poultices midway between the umbilicus and pubis. An abscess formed and was opened; a considerable discharge of pus was then evacuated, and an oozing continued for between two and three weeks, when a hard substance was discovered in the mouth of the opening, and she presented herself to me for examination. I was astonished on removing the bandages which were placed over the sore, to find them emit a most offensive urinous smell; and she then for the first time mentioned that a considerable quantity of urine had for several days been making its escape from this opening. I proceeded with little difficulty to extract three small brown calculi, and at periods, months asunder, have in the whole removed thirteen. The urine continued to trickle away for more than two years. The sore is now healed, and she finds no uneasiness in the part, nor is there any hardness save what might be expected from a small cicatrix."

I have examined one of the calculi and find it to be of that rare species the "cystic oxide," its colour is a pale brown beautifully

streaked with yellow, and it is of a pyramidal form, having a broad base with four sides tapering to a point. * I remember having applied a number of them together, and from the accurate manner in which they fitted, I should suppose that they had formed, ere their expulsion from the kidney, a solid mass resembling a miniature causeway of basalt. The size of each was nearly that of a common hazel-nut. That the calculi are of the pure renal oxide kind I cannot doubt. Formed in the kidney, and never having been introduced to the bladder, the question would be—How could they have contrived to force their way through the parietes of the abdomen? Had there been the want of urinary discharge we might have doubted our tests, and have imagined that they were biliary productions: but extracted from an opening through which urine in quantity flowed for a period exceeding two years, that circumstance alone should lull such suspicion. Had the calculi been conveyed through the ureter into the bladder, the presence of such a number must at one time or other have created some uneasiness in that organ, which, however, never was the case; and their lodgment and final expulsion through its parietes would rather have taken place from the neighbourhood of the cervix than the fundus vesici; besides, their light and smooth texture would have ill-qualified them for forcing their way through so slippery a barrier as the mucous membrane of the bladder. I can only suppose that just as the ureter is piercing the bladder, their progress had been stopped by a want of elasticity in this part. Constant pressure, irritation, and inflammation, would soon force a way through some of its folds, and running between these there would be little difficulty in their tracing their way to the anterior of the viscus, where a want of peritoneum would afford a ready and safe egress from their captivity by the process of ulceration. The reasons for my belief that they never had entered the bladder are, the *constant* oozing of urine, which continued from the opening in the abdomen for so long a period, when, had the passage been directly into the bladder, the circumstance would have taken place only when the receptacle was distended. Another reason is, the kindly manner in which the sore healed when all the foreign bodies had been extracted, leaving no fistula, and proving that the abdominal muscles had acted as compresses, keeping the edges of the canal in apposition until the adhesive process had effected a cure; when, had the opening been into the bladder, each action of those muscles would have jerked out its contents and have prevented a union.

23, Nelson Street, Liverpool, Nov. 16.

* I should mention that having cut through the calculus, a *hollow* instead of a *nucleus* was found in its centre. Dr. Wollaston mentions a circumstance nearly similar, in the *Philosophical Transactions*, 1810, page 223.—H. N.

NOTE FROM DR. STEVENS.

To the Editor of THE LANCET.

SIR,—I have had reason to believe that for some time past, reports similar to the accusations contained against me in Dr. Johnson's late letter, have been circulating slowly in some of the private medical circles in this city, but in so cautious a manner that they were not tangible, for I found it impossible to trace them to their real source. With a belief that such a cause was in operation against me, I was not sorry when I saw the same accusations openly and boldly stated in a public journal. Unfounded attacks, like venomous reptiles, are only dangerous when they crawl in the dark;—when they venture to show themselves in open day, the one like the other can easily be crushed.

At the time that my paper was written for the Royal College of Physicians, I had a thorough conviction that every syllable which I had stated in that document was most religiously true. I thought so then, and I must say, though I may be mistaken, that I think so still, even in the face of the bold assertions which Dr. Johnson has made in the last number of your Journal.

I have written a statement of the facts relative to this subject, but for the moment at least I will defer sending it to the press; were I to do so now it is more than probable that it might be the means of preventing the publication of those valuable Trinidad documents which contain such a mass of important information. But independent of this, though Dr. Johnson has stated his charges distinctly enough, I am still left in the dark with respect to the real nature of the facts by which these charges are to be proved. When we know what the proofs are, we shall then be more able to judge of their value. Dr. Johnson, however, has promised to publish the said documents within fifteen days from the date of his letter. When this is done, I pledge myself, on the other hand, to lose no time in producing sufficient evidence to prove that all which I have stated, and perhaps even a great deal more, is perfectly correct. I am, Sir, your most obedient servant,

WILLIAM STEVENS, M.D.

December 14, 1831.

We are again compelled to omit Dr. Billing's lecture, Dr. G. Smith's paper, and many articles from Correspondents.